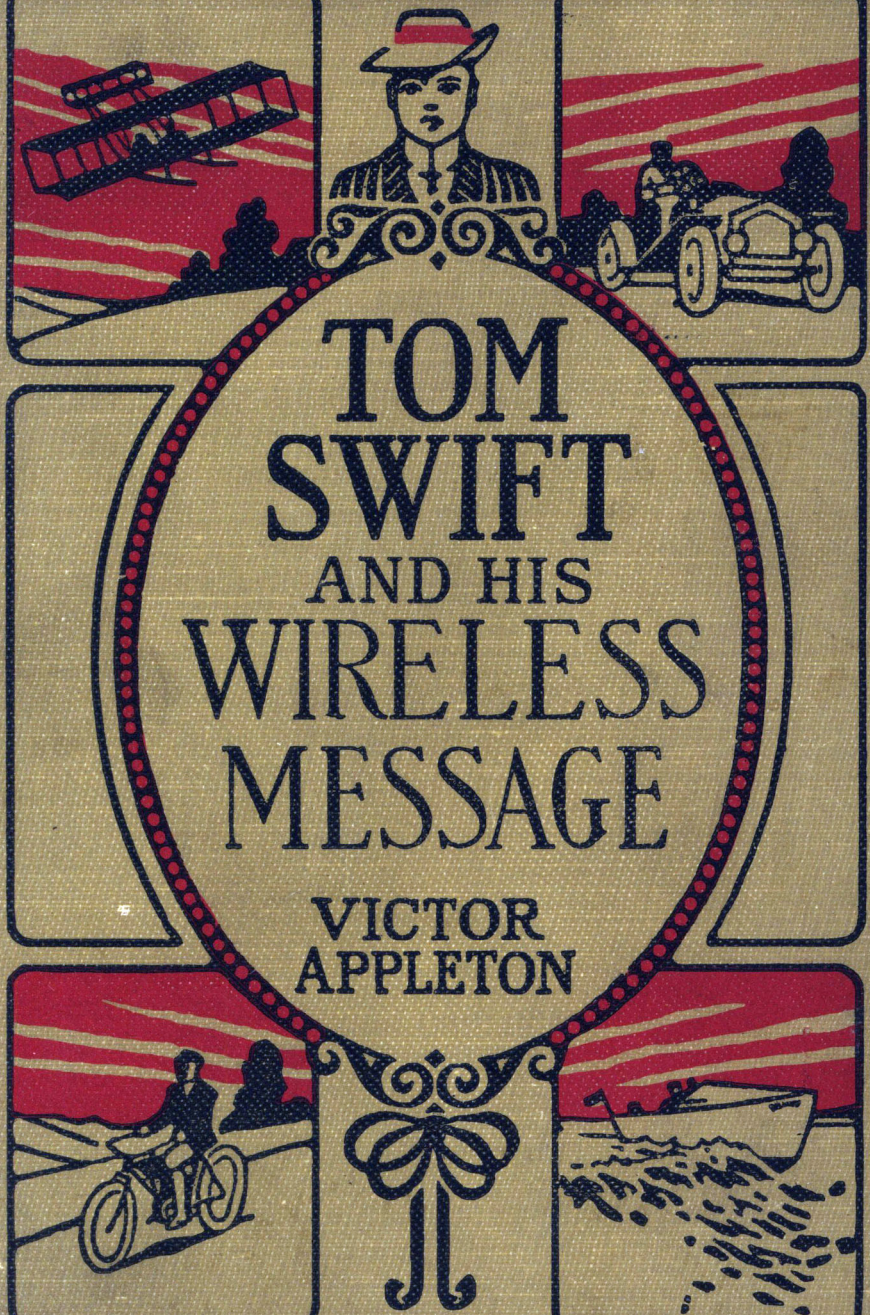

TOM SWIFT AND HIS WIRELESS MESSAGE

VICTOR APPLETON

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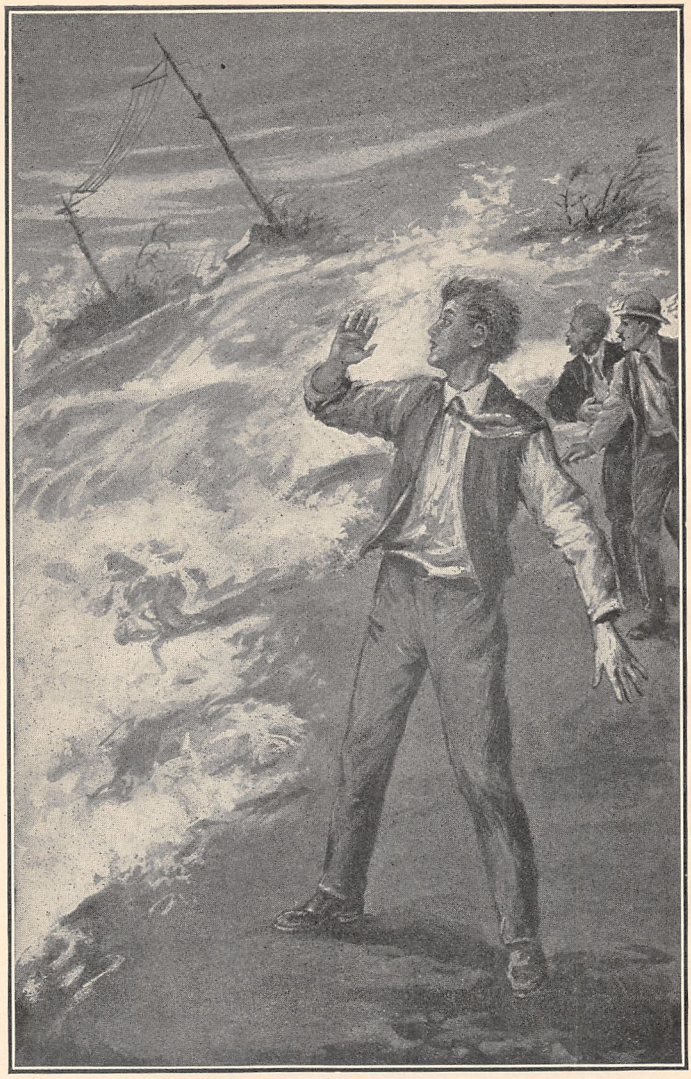

TOM, LOOKING TOWARD HIS WIRELESS STATION, SAW NEARLY HALF OF THE ISLAND DISAPPEAR.—*Page* 203.

Tom Swift and His Wireless Message.

TOM SWIFT AND HIS WIRELESS MESSAGE

OR

The Castaways of Earthquake Island

BY

VICTOR APPLETON

AUTHOR OF "TOM SWIFT AND HIS MOTOR-CYCLE," "TOM SWIFT AND HIS MOTOR-BOAT," "TOM SWIFT AND HIS AIRSHIP," "TOM SWIFT AND HIS SUBMARINE BOAT," "TOM SWIFT AND HIS ELECTRIC RUNABOUT," ETC.

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THE TOM SWIFT SERIES

TOM SWIFT AND HIS MOTOR-CYCLE
Or Fun and Adventures on the Road

TOM SWIFT AND HIS MOTOR-BOAT
Or the Rivals of Lake Carlopa

TOM SWIFT AND HIS AIRSHIP
Or the Stirring Cruise of the Red Cloud

TOM SWIFT AND HIS SUBMARINE BOAT
Or Under the Ocean for Sunken Treasure

TOM SWIFT AND HIS ELECTRIC RUNABOUT
Or the Speediest Car on the Road

TOM SWIFT AND HIS WIRELESS MESSAGE
Or the Castaways of Earthquake Island

TOM SWIFT AMONG THE DIAMOND MAKERS
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Or the Wreck of the Airship

TOM SWIFT AND HIS SKY RACER
Or the Quickest Flight on Record

TOM SWIFT AND HIS ELECTRIC RIFLE
Or Daring Adventures in Elephant Land

(Other Volumes in Preparation)

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Tom Swift and His Wireless Message

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TOM SWIFT AND HIS WIRELESS MESSAGE

CHAPTER I

AN APPEAL FOR AID

TOM SWIFT stepped from the door of the machine shop, where he was at work making some adjustments to the motor of his airship, and glanced down the road. He saw a cloud of dust, which effectually concealed whatever was causing it.

"Some one must be in a hurry this morning," the lad remarked. "Looks like a motor speeding along. My! but we certainly do need rain," he added, as he looked up toward the sky. "It's very dusty. Well, I may as well get back to work. I'll take the airship out for a flight this afternoon, if the wind dies down a bit."

The young inventor, for Tom Swift himself had built the airship, as well as several other

crafts for swift locomotion, turned to re-enter the shop.

Something about the approaching cloud of dust, however, held his attention. He glanced more intently at it.

"If it's an automobile coming along," he murmured, "it's moving very slowly, to make so much fuss. And I never saw a motor-cycle that would kick up as much sand, and not speed along more. It ought to be here by now. I wonder what it can be?"

The cloud of highway dirt rolled along, making some progress toward Tom's house and the group of shops and other buildings surrounding it. But, as the lad had said, the dust did not move at all quickly in comparison to any of the speedy machines that might be causing it. And the cloud seemed momentarily to grow thicker and thicker.

"I wonder if it could be a miniature tornado, or a cyclone or whirlwind?" and Tom spoke aloud, a habit of his when he was thinking, and had no one to talk to. "Yet it can hardly be that," he went on. "Guess I'll watch and see what it is."

Nearer and nearer came the dust cloud. Tom peered anxiously ahead, a puzzled look on his face. A few seconds later there came from the

midst of the obscuring cloud a voice, exclaiming:

"G'lang there now, Boomerang! Keep yo' feet a-movin' an' we sho' will make a record. 'Tain't laik we was a autermobiler, er a electricity car, but we sho' hab been goin' sence we started. Yo' sho' done yo'se'f proud t'day, Boomerang, an' I'se gwine t' keep mah promise an' gib yo' de bestest oats I kin find. Ah reckon Massa Tom Swift will done say we brought dis yeah message t' him as quick as anybody could."

Then there followed the sound of hoofbeats on the dusty road, and the rattle of some many-jointed vehicle, with loose springs and looser wheels.

"Eradicate Sampson!" exclaimed Tom. "But who would ever think that the colored man's mule could get up such speed as that cloud of dust indicates. His mule's feet must be working overtime, but he goes backward about as often as he moves forward. That accounts for it. There's lots of dust, but not much motion."

Once more, from the midst of the ball-like cloud of dirt came the voice of the colored man:

"Now behave yo'se'f, Boomerang. We'm almost dere, an' den yo' kin sit down an' rest if yo' laik. Jest keep it up a little longer, an' we'll gib

Massa Tom his telephone. G'lang now, Boomerang."

The tattoo of hoofbeats was slowing up now, and the cloud of dust was not so heavy. It was gradually blowing away. Tom Swift walked down to the fence that separated the house, grounds and shops from the road. As he got there the sounds of the mule's progress, and the rattle of the wagon, suddenly ceased.

"G'lang! G'lang! Don't yo' dare t' stop now, when we am most dere!" cried Eradicate Sampson. "Keep a-movin', Boomerang!"

"It's all right, Eradicate. I'm here," called Tom, and when the last of the dust had blown away, the lad waved his hand to an aged colored man, who sat upon the seat of perhaps the most dilapidated wagon that was ever dignified by such a name. It was held together with bits of wire, rope and strings, and each of the four wheels leaned out at a different angle. It was drawn by a big mule, whose bones seemed protruding through his skin, but that fact evidently worried him but little, for now the animal was placidly sleeping, while standing up, his long ears moving slowly to and fro.

"Am dat yo', Massa Tom?" asked Eradicate, ceasing his task of jerking on the lines, to which operation the mule paid not the least attention.

"Yes, I'm here, Rad," replied Tom, smiling. "I came out of my shop to see what all the excitement was about. How did you ever get your mule to make so much dust?"

"I done promise him an extra helpin' ob oats ef he make good time," said the colored man. "An' he done it, too. Did yo' see de dust we made?"

"I sure did, but you didn't do much else. And you didn't make very good time. I watched you, and you came along like an ice wagon after a day's work on the Fourth of July. You were going fast, but moving slow."

"I 'spects we was, Massa Tom," was the colored man's answer. "But Boomerang done better dan I 'spected he would. I done tole him yo'd be in a hurry t' git yo' telephone, an' he sho' did trot along."

"My telephone?" repeated Tom, wonderingly. "What have you and your mule Boomerang to do with my telephone? That's up in the house."

"No, it ain't! it's right yeah in mah pocket," chuckled Eradicate, opening a ragged coat, and reaching for something. "I got yo' telephone right yeah," he went on. "De agent at de station see me dribin' ober dis way, an' he done ast me t' deliber it. He said as how he ain't got no messenger boy now, 'cause de one he done hab

went on a strike fo' five cents mo' a day. So I done took de telephone," and with that the colored man pulled out a crumpled yellow envelope.

"Oh, you mean a telegram," said Tom, with a laugh, as he took the message from the odd colored man.

"Well, maybe it's telegraf, but I done understood de agent t' say telephone. Anyhow, dere it is. An' I s'pects we'd better git along, Boomerang."

The mule never moved, though Eradicate yanked on the reins, and used a splintered whip with energy.

"I said as how we'd better git along, Boomerang," went on the darkey, raising his voice. "Dinnah am mos' ready, an' I'm goin' t' giv yo' an extra helpin' ob oats."

The effect of these words seemed magical. The mule suddenly came to life, and was about to start off.

"I done thought dat would cotch yo', Boomerang," chuckled Eradicate.

"Wait a minute, Rad," called Tom, who was tearing open the envelope of the telegram. "I might want to send an answer back by you. I wonder who is wiring me now?"

He read the message slowly, and Eradicate remarked:

"'Taint no kind ob use, Massa Tom, fo' t' send a message back wif me."

"Why not?" asked the young inventor, looking up from the sheet of yellow paper.

"'Case as how I done promised Boomerang his dinnah, an' he won't do nothin' till he has it. Ef I started him back t' town now he would jest lay down in de road. I'll take de answer back fo' you dis arternoon."

"All right, perhaps that will do," assented Tom. "I haven't quite got the hang of this yet. Drop around this afternoon, Rad," and as the colored man, who, with his mule Boomerang, did odd jobs around the village, started off down the highway, in another cloud of dust, Tom Swift resumed the reading of the message.

"Hum, this is rather queer," he mused, when having read it once, he began at it again. "It must have cost him something to send all this over the wire. He could just as well have written it. So he wants my help, eh? Well, I never heard of him, and he may be all right, but I had other plans, and I don't know whether I can spare the time to go to Philadelphia or not. I'll have to think it over. An electric airship, eh? He's sort of following along the lines of my inventions. Wants my aid—hum—well, I don't know——"

Tom's musings were suddenly cut short by the

approach of an elderly gentleman, who was walking slowly down the path that led from the house to the country highway which ran in front of it.

"A telegram, Tom?" asked the newcomer.

"Yes, dad," was the reply. "I was just coming in to ask your advice about it. Eradicate brought it to me."

"What, with his mule, Boomerang?" and the gentleman seemed much amused. "How did he ever get up speed enough to deliver a telegram?"

"Oh, Eradicate has some special means he uses on his mule when he's in a hurry. But listen to this message, dad. It's from a Mr. Hosmer Fenwick, of Philadelphia. He says:

" 'Tom Swift—Can you come on to Philadelphia at once and aid me in perfecting my new electric airship? I want to get it ready for a flight before some government experts who have promised to purchase several if it works well. I am in trouble, and I can't get it to rise off the ground. I need help. I have heard about your airship, and the other inventions you and your father have perfected, and I am sure you can aid me. I am stuck. Can you hurry to the Quaker City? I will pay you well. Answer at once!' "

"Well?" remarked Mr. Swift, questioningly,

as his son finished reading the telegram. "What are you going to do about it, Tom?"

"I don't exactly know, dad. I was going to ask your advice. What would you do? Who is this Mr. Fenwick?"

"Well, he is an inventor of some note, but he has had many failures. I have not heard of him in some years until now. He is a gentleman of wealth, and can be relied upon to do just as he says. We are slightly acquainted. Perhaps it would be well to aid him, if you can spare the time. Not that you need the money, but inventors should be mutually helpful. If you feel like going to Philadelphia, and aiding him in getting his electric airship in shape, you have my permission."

"I don't know," answered Tom, doubtfully. "I was just getting my monoplane in shape for a little flight. It was nothing particular, though. Dad, I think I *will* take a run to Philadelphia, and see if I can help Mr. Fenwick. I'll wire him that I am coming, to-morrow or next day."

"Very well," assented Mr. Swift, and then he and his son went into one of the shops, talking of a new invention which they were about to patent.

Tom little knew what a strange series of adventures were to follow his decision to go to the Quaker City, nor the danger involved in aiding Mr. Fenwick to operate his electric airship.

CHAPTER II

MISS NESTOR'S NEWS

"WHEN do you think you will go to Philadelphia, Tom?" asked Mr. Swift, a little later, as the aged inventor and his son were looking over some blueprints which Garret Jackson, an engineer employed by them, had spread out on a table.

"I don't exactly know," was the answer. "It's quite a little run from Shopton, because I can't get a through train. But I think I'll start tomorrow."

"Why do you go by train?" asked Mr. Jackson.

"Why—er—because——" was Tom's rather hesitating reply. "How else would I go?"

"Your monoplane would be a good deal quicker, and you wouldn't have to change cars," said the engineer. "That is if you don't want to take out the big airship. Why don't you go in the monoplane?"

"By Jove! I believe I will!" exclaimed Tom. "I never thought of that, though it's a wonder I didn't. I'll not take the *Red Cloud,* as she's too hard to handle alone. But the *Butterfly* will be just the thing," and Tom looked over to where a new monoplane rested on the three bicycle wheels which formed part of its landing frame. "I haven't had it out since I mended the left wing tip," he went on, "and it will also be a good chance to test my new rudder. I believe I *will* go to Philadelphia by the *Butterfly.*"

"Well, as long as that's settled, suppose you give us your views on this new form of storage battery," suggested Mr. Swift, with a fond glance at his son, for Tom's opinion was considered valuable in matters electrical, as those of you, who have read the previous books in this series, well know.

The little group in the machine shop was soon deep in the discussion of ohms, amperes, volts and currents, and, for a time, Tom almost forgot the message calling him to Philadelphia.

Taking advantage of the momentary lull in the activities of the young inventor, I will tell my readers something about him, so that those who have no previous introduction to him may feel that he is a friend.

Tom Swift lived with his father, Barton Swift,

a widower, in the village of Shopton, New York. There was also in the household Mrs. Baggert, the aged housekeeper, who looked after Tom almost like a mother. Garret Jackson, an engineer and general helper, also lived with the Swifts.

Eradicate Sampson might also be called a retainer of the family, for though the aged colored man and his mule Boomerang did odd work about the village, they were more often employed by Tom and his father than by any one else. Eradicate was so called because, as he said, he "eradicated" the dirt. He did whitewashing, made gardens, and did anything else that was needed. Boomerang was thus named by his owner, because, as Eradicate said, "yo' nebber know jest what dat mule am goin' t' do next. He may go forward or he may go backward, jest laik them Australian boomerangs."

There was another valued friend of the family, Wakefield Damon by name, to whom the reader will be introduced in due course. And then there was Mary Nestor, about whom I prefer to let Tom tell you himself, for he might be jealous if I talked too much about her.

In the first book of this series, called "Tom Swift and His Motor-Cycle," there was told how he became possessed of the machine, after it had nearly killed Mr. Damon, who was learning to

ride it. Mr. Damon, who had a habit of "blessing" everything from his collar button to his shoe laces, did not "bless" the motor-cycle after it tried to climb a tree with him; and he sold it to Tom very cheaply. Tom repaired it, invented some new attachments for it, and had a number of adventures on it. Not the least of these was trailing after a gang of scoundrels who tried to get possession of a valuable patent model belonging to Mr. Swift.

Our second book, called "Tom Swift and His Motor-Boat," related some exciting times following the acquisition by the young inventor of a speedy craft which the thieves of the patent model had stolen. In the boat Tom raced with Andy Foger, a town bully, and beat him. Tom also took out on pleasure trips his chum, Ned Newton, who worked in a Shopton bank, and the two had fine times together. Need I also say that Mary Nestor also had trips in the motor-boat? Besides some other stirring adventures in his speedy craft, Tom rescued, from a burning balloon that fell into the lake, the aeronaut, John Sharp. Later Mr. Sharp and Tom built an airship, called the *Red Cloud,* in which they had some strenuous times.

Their adventures in this craft of the air form the basis for the third book of the series, entitled

"Tom Swift and His Airship." In the *Red Cloud,* Tom and his friends, including Mr. Damon, started to make a record flight. They left Shopton the night when the bank vault was blown open, and seventy-five thousand dollars stolen.

Because of evidence given by Andy Foger, and his father, suspicion pointed to Tom and his friends as the robbers, and they were pursued. But they turned the tables by capturing the real burglars, and defeating the mean plans of the Fogers.

Not satisfied with having mastered the air Tom and his father turned their attention to the water. Mr. Swift perfected a new type of craft, and in the fourth book of the series, called "Tom Swift and His Submarine," you may read how he went after a sunken treasure. The party had many adventures, and were in no little danger from their enemies before they reached the wreck with its store of gold.

The fifth book of the series, named "Tom Swift and His Electrical Runabout," told how Tom built the speediest car on the road, and won a prize with it, and also saved a bank from ruin.

Tom had to struggle against odds, not only in his inventive work, but because of the meanness of jealous enemies, including Andy Foger, who

seemed to bear our hero a grudge of long standing. Even though Tom had, more than once, thrashed Andy well, the bully was always seeking a chance to play some mean trick on the young inventor. Sometimes he succeeded, but more often the tables were effectually turned.

It was now some time since Tom had won the prize in his electric car and, in the meanwhile he had built himself a smaller airship, or, rather, monoplane, named the *Butterfly*. In it he made several successful trips about the country, and gave exhibitions at numerous aviation meets; once winning a valuable prize for an altitude flight. In one trip he had met with a slight accident, and the monoplane had only just been repaired after this when he received the message summoning him to Philadelphia.

"Well, Tom," remarked his father that afternoon, "if you are going to the Quaker City, to see Mr. Fenwick to-morrow, you'd better be getting ready. Have you wired him that you will come?"

"No, I haven't, dad," was the reply. "I'll get a message ready at once, and when Eradicate comes back I'll have him take it to the telegraph office."

"I wouldn't do that, Tom."

"Do what?"

"Trust it to Eradicate. He means all right, but there's no telling when that mule of his may lie down in the road, and go to sleep. Then your message won't get off, and Mr. Fenwick may be anxiously waiting for it. I wouldn't like to offend him, for, though he and I have not met in some years, yet I would be glad if you could do him a favor. Why not take the message yourself?"

"Guess I will, dad. I'll run over to Mansburg in my electric car, and send the message from there. It will go quicker, and, besides, I want to get some piano wire to strengthen the wings of my monoplane."

"All right, Tom, and when you telegraph to Mr. Fenwick, give him my regards, and say that I hope his airship will be a success. So it's an electric one, eh? I wonder how it works? But you can tell me when you come back."

"I will, dad. Mr. Jackson, will you help me charge the batteries of my car. I think they need replenishing. Then I'll get right along to Mansburg."

Mansburg was a good-sized city some miles from the village of Shopton, and Tom and his father had frequent business there.

The young inventor and the engineer soon had the electric car in readiness for a swift run, for

the charging of the batteries could be done in much less than the time usual for such an operation, owing to a new system perfected by Tom. The latter was soon speeding along the road, wondering what sort of an airship Mr. Fenwick would prove to have, and whether or not it could be made to fly.

"It's easy enough to build an airship," mused Tom, "but the difficulty is to get them off the ground, and keep them there." He knew, for there had been several failures with his monoplane before it rose like a bird and sailed over the tree-tops.

The lad was just entering the town, and had turned around a corner, twisting about to pass a milk wagon, when he suddenly saw, darting out directly in the path of his car, a young lady.

"Look out!" yelled Tom, ringing his electric gong, at the same time shutting off the current, and jamming on the powerful brakes.

There was a momentary scream of terror from the girl, and then, as she looked at Tom, she exclaimed:

"Why, Tom Swift! What are you trying to do? Run me down?"

"Mary—Miss Nestor!" ejaculated our hero, in some confusion.

He had brought his car to a stop, and had thrown open the door, alighting on the crossing, while a little knot of curious people gathered about.

"I didn't see you," went on the lad. "I came from behind the milk wagon, and——"

"It was my fault," Miss Nestor hastened to add. "I, too, was waiting for the milk wagon to pass, and when it got out of my way, I darted around the end of it, without looking to see if anything else was coming. I should have been more careful, but I'm so excited that I hardly know what I'm doing."

"Excited? What's the matter?" asked Tom, for he saw that his friend was not her usual calm self. "Has anything happened, Mary?"

"Oh, I've such news to tell you!" she exclaimed.

"Then get in here, and we'll go on," advised Tom. "We are collecting a crowd. Come and take a ride; that is if you have time."

"Of course I have," the girl said, with a little blush, which Tom thought made her look all the prettier. "Then we can talk. But where are you going?"

"To send a message to a gentleman in Philadelphia, saying that I will help him out of some difficulties with his new electric airship. I'm go-

ing to take a run down there in my monoplane, *Butterfly,* to-morrow, and——"

"My! to hear you tell it, one would think it wasn't any more to make an airship flight than it was to go shopping," interrupted Mary, as she entered the electric car, followed by Tom, who quickly sent the vehicle down the street.

"Oh, I'm getting used to the upper air," he said. "But what is the news you were to tell me?"

"Did you know mamma and papa had gone to the West Indies?" asked the girl.

"No! I should say that *was* news. When did they go? I didn't know they intended to make a trip."

"Neither did they; nor I, either. It was very sudden. They sailed from New York yesterday. Mr. George Hosbrook, a business friend of papa's, offered to take them on his steam yacht, *Resolute.* He is making a little pleasure trip, with a party of friends, and he thought papa and mamma might like to go.

"He wired to them, they got ready in a rush, caught the express to New York, and went off in such a hurry that I can hardly realize it yet. I'm left all alone, and I'm in such trouble!"

"Well, I should say that was news," spoke Tom.

"Oh, you haven't heard the worst yet," went on Mary. "I don't call the fact that papa and mamma went off so suddenly much news. But the cook just left unexpectedly, and I have invited a lot of girl friends to come and stay with me, while mamma and papa are away; and now what shall I do without a cook? I was on my way down to an intelligence office, to get another servant, when you nearly ran me down! Now, isn't that news?"

"I should say it was—two kinds," admitted Tom, with a smile. "Well, I'll help you all I can. I'll take you to the intelligence office, and if you can get a cook, by hook or by crook, I'll bundle her into this car, and get her to your house before she can change her mind. And so your people have gone to the West Indies?"

"Yes, and I wish I had the chance to go."

"So do I," spoke Tom, little realizing how soon his wish might be granted. "But is there any particular intelligence office you wish to visit?"

"There's not much choice," replied Mary Nestor, with a smile, "as there's only one in town. Oh, I do hope I can get a cook! It would be dreadful to have nothing to eat, after I'd asked the girls to spend a month with me; wouldn't it?"

Tom agreed that it certainly would, and they soon after arrived at the intelligence office.

CHAPTER III

TOM KNOCKS OUT ANDY

"Do YOU want me to come in and help you?" asked the young inventor, of Miss Nestor.

"Do you know anything about hiring a cook?" she inquired, with an arch smile.

"I'm afraid I don't," the lad was obliged to confess.

"Then I'm a little doubtful of your ability to help me. But I'm ever so much obliged to you. I'll see if I can engage one. The cook who just left went away because I asked her to make some apple turnovers. Some of the girls who are coming are very fond of them."

"So am I," spoke Tom, with a smile.

"Are you, indeed? Then, if the cook I hope to get now will make them, I'll invite you over to have some, and—also meet my friends."

"I'd rather come when just you, and the turnovers and the cook are there," declared Tom, boldly, and Mary, with a blush, made ready to leave the electric car.

"Thank you," she said, in a low voice.

"If I can't help you select a cook," went on Tom, "at least let me call and take you home when you have engaged one."

"Oh, it will be too much trouble," protested Miss Nestor.

"Not at all. I have only to send a message, and get some piano wire, and then I'll call back here for you. I'll take you and the new cook back home flying."

"All right, but don't fly so fast. The cook may get frightened, and leave before she has a chance to make an apple turnover."

"I'll go slower. I'll be back in fifteen minutes," called Tom, as he swung the car out away from the curb, while Mary Nestor went into the intelligence office.

Tom wrote and sent this message to Mr. Hosmer Fenwick, of Philadelphia:

"Will come on to-morrow in my aeroplane, and aid you all I can. Will not promise to make your electric airship fly, though. Father sends regards."

"Just rush that, please," he said to the telegraph agent, and the latter, after reading it over, remarked:

"It'll rush itself, I reckon, being all about airships, and things like that," and he laughed as Tom paid him.

Selecting several sizes of piano wire of great strength, to use as extra guy-braces on the *Butterfly,* Tom re-entered his electric car, and hastened back to the intelligence office, where he had left his friend. He saw her standing at the front door, and before he could alight, and go to her, Miss Nestor came out to meet him.

"Oh, Tom!" she exclaimed, with a little tragic gesture, "what do you think?"

"I don't know," he answered good-naturedly. "Does the new cook refuse to come unless you do away with apple turnovers?"

"No, it isn't that. I have engaged a real treasure, I'm sure, but as soon as I mentioned that you would take us home in the electric automobile, she flatly refused to come. She said walking was the only way she would go. She hasn't been in this country long. But the worst of it is that a rich woman has just telephoned in for a cook, and if I don't get this one away, the rich lady may induce her to come to her house, and I'll be without one! Oh, what shall I do?" and poor Mary looked quite distressed.

"Humph! So she's afraid of electric autos; eh?" mused Tom. "That's queer. Leave it to

me, Mary, and perhaps I can fix it. You want to get her away from here in a hurry; don't you?"

"Yes, because servants are so scarce, that they are engaged almost as soon as they register at the intelligence office. I know the one I have hired is suspicious of me, since I have mentioned your car, and she'll surely go with Mrs. Duy Puyster when she comes. I'm sorry I spoke of the automobile."

"Well, don't worry. It's partly my fault, and perhaps I can make amends. I'll talk to the new cook," decided the young inventor.

"Oh, Tom, I don't believe it will do any good. She won't come, and all my girl friends will arrive shortly." Miss Nestor was quite distressed.

"Leave it to me," suggested the lad, with an assumed confidence he did not feel. He left the car, and walked toward the office. Entering it, with Miss Nestor in his wake, he saw a pleasant-faced Irish girl, sitting on a bench, with a bundle beside her.

"And so you don't want to ride in an auto?" began Tom.

"No, an' it's no use of the likes of you askin' me, either," answered the girl, but not impudently. "I am afeered of thim things, an' I won't work in a family that owns one."

"But we don't own one," said Mary.

The girl only sniffed.

"It is the very latest means of traveling," Tom went on, "and there is absolutely no danger. I will drive slowly."

"No!" snapped the new cook.

Tom was rather at his wits' ends. At that moment the telephone rang, and Tom and Mary, listening, could hear the proprietress of the intelligence office talking to Mrs. Duy Puyster over the wire.

"We must get her away soon," whispered Mary, with a nod at the Irish girl, "or we'll lose her."

Tom was thinking rapidly, but no plan seemed to come to him. A moment later one of the assistants of the office led out from a rear room another Irish girl, who, it seems, had just engaged herself to work in the country.

"Good-by, Bridget," said this girl, to the one Mary Nestor had hired. "I'm off now. The carriage has just come for me. I'm goin' away in style."

"Good luck, Sarah," wished Bridget.

Tom looked out of the window. A dilapidated farm wagon, drawn by two rusty-looking horses, was just drawing up at the curb.

"There is your employer, Sarah," said the

proprietress of the office. "You will have a nice ride to the country and I hope you will like the place."

A typical country farmer alighted from the wagon, leaving a woman, evidently his wife, on the seat. He called out:

"I'll git th' servant-gal, 'Mandy, an' we'll drive right out hum. Then you won't have such hard work any more."

"An' so that's the style you was tellin' me of; eh, Sarah?" asked the cook whom Miss Nestor had engaged. "That's queer style, Sarah."

Sarah was blushing from shame and mortification. Tom was quick to seize the advantage thus offered.

"Bridget, if *you* appreciate style," he said, "you will come in the automobile. I have one of the very latest models, and it is very safe. But perhaps you prefer a farm wagon."

"Indade an' I don't!" was the ready response. "I'll go wid you now if only to show Sarah Malloy thot I have more style than her! She was boastin' of the fine place she had, an' th' illigant carriage that was comin' t' take her to the counthry. If that's it I want none of it! I'll go wid you an' th' young gintleman. Style indade!" and, gathering up her bundle she followed Tom and Mary to the waiting auto.

They entered it and started off, just as Mrs. Duy Puyster drove up in her elegantly appointed carriage, while Sarah, with tears of mortification in her eyes, climbed up beside the farmer and his wife.

"You saved the day for me, Tom," whispered Miss Nestor, as the young inventor increased the speed of his car. "It was only just in time."

"Don't forget the apple turnovers," he whispered back.

Once she had made the plunge, the new cook seemed to lose her fears of the auto, and enjoyed the ride. In a short time she had been safely delivered at Miss Nestor's home, while that young lady repeated her thanks to Tom, and renewed her invitation for him to come and sample the apple turnovers, which Tom promised faithfully to do, saying he would call on his return from Philadelphia.

Musing on the amusing feature of his trip, Tom was urging his auto along at moderate speed, when, as he turned down a country road, leading to his home, he saw, coming toward him, a carriage, drawn by a slow-moving, white horse, and containing a solitary figure.

"Why, that looks like Andy Foger," spoke Tom, half aloud. "I wonder what he's doing out driving? His auto must be out of commission.

But that's not strange, considering the way he abuses the machine. It's in the repair shop half the time."

He slowed down still more, for he did not know but that Andy's horse might be skittish. He need have no fears, however, for the animal did not seem to have much more life than did Eradicate's mule, Boomerang.

As Tom came nearer the carriage, he was surprised to see Andy deliberately swing his horse across the road, blocking the highway by means of the carriage and steed.

"Well, Andy Foger, what does that mean?" cried Tom, indignantly, as he brought his car to a sudden stop. "Why do you block the road?"

"Because I want to," snarled the bully, taking out a notebook and pencil, and pretending to make some notes about the property in front of which he had halted. "I'm in the real estate business now," went on Andy, "and I'm getting descriptions of the property I'm going to sell. Guess I've got a right to stop in the road if I want to!"

But not to block it up," retorted Tom. "That's against the law. Pull over and let me pass!"

"Suppose I don't do it?"

"Then I'll make you!"

"Huh! I'd like to see you try it!" snapped

Andy. "If you make trouble for me, it will be the worse for you."

"If you pull to one side, so I can pass, there'll be no trouble," said Tom, seeing that Andy wished to pick a quarrel.

"Well, I'm not going to pull aside until I finish putting down this description," and the bully continued to write with tantalizing slowness.

"Look here!" exclaimed Tom Swift, with sudden energy. "I'm not going to stand for this! Either you pull to one side and let me pass, or——"

"Well, what will you do?" demanded the bully.

"I'll shove you to one side, and you can take the consequences!"

"You won't dare to!"

"I won't, eh? Just you watch."

Tom threw forward the lever of his car. There was a hum of the motor, and the electric moved ahead. Andy had continued to write in the book, but at this sound he glanced up.

"Don't you dare to bunk into me!" yelled Andy. "If you do I'll sue you for damages!"

"Get out of the way, or I'll shove you off the road!" threatened Tom, calmly.

"I'll not go until I get ready."

"Oh, yes you will," responded our hero quietly. He sent his car ahead slowly but surely. It was

within a few feet of the carriage containing Andy. The bully had dropped his notebook, and was shaking his fist at Tom.

As for the young inventor he had his plans made. He saw that the horse was a quiet, sleepy one, that would not run away, no matter what happened, and Tom only intended to gently push the carriage to one side, and pass on.

The front of his auto came up against the other vehicle.

"Here, you stop!" cried Andy, savagely.

"It's too late now," answered Tom, grimly.

Andy reached for the horsewhip. Tom put on a little more power, and the carriage began to slide across the road, but the old horse never opened his eyes.

"Take that!" cried Andy, raising his whip, with the intention of slashing Tom across the face, for the front of the auto was open. But the blow never fell, for, the next instant, the carriage gave a lurch as one of the wheels slid against a stone, and, as Andy was standing up, and leaning forward, he was pitched head first out into the road.

"By Jove! I hope I haven't hurt him!" gasped Tom, as he leaped from his auto, which he had brought to a stop.

The young inventor bent over the bully. There

was a little cut on Andy's forehead, and his face was white. He had been most effectually knocked out, entirely by his own meanness and fault, but, none the less, Tom was frightened. He raised up Andy's head on his arm, and brushed back his hair. Andy was unconscious.

CHAPTER IV

MR. DAMON WILL GO ALONG

AT FIRST Tom was greatly frightened at the sight of Andy's pale face. He feared lest the bully might be seriously hurt. But when he realized that the fall from the carriage, which was a low one, was not hard, and that Andy had landed on his outstretched hands before his head came in contact with the earth, our hero was somewhat reassured.

"I wish I had some water, with which to bathe his head," Tom murmured, and he looked about in vain for some. But it was not needed, for, a moment later, Andy opened his eyes, and, when he saw Tom bending over, and holding him, the bully exclaimed:

"Here! You let me go! Don't you hit me again, Tom Swift, or I'll punch you!"

"I didn't hit you," declared Tom, while Andy tore himself away, and struggled to his feet.

"Yes, you did, too, hit me!"

"I did not! You tried to strike me with your

whip, as I was shoving your carriage out of the way, which I had a perfect right to do, as you were blockading the highway. You lost your balance and fell. It was your own fault."

"Well, you'll suffer for it, just the same, snarled Andy, and then, putting his hand to his head, and bringing it away, with some drops of blood on it, he cried out:

"Oh, I'm hurt! I'm injured! Get a doctor, or maybe I'll bleed to death!" He began blubbering, for Andy, like all bullies, was a coward.

"You're not hurt," asserted Tom, trying not to laugh. "It's only a scratch. Next time don't try to blockade the whole street, and you won't get into trouble. Are you able to drive home; or shall I take you in my car?"

"I wouldn't ride in your car!" snapped the ugly lad. "You go on, and mind your business now, and I'll pay you back for this, some day. I could have you arrested!"

"And so could I have you locked up for obstructing traffic. But I'll not. Your rig isn't damaged, and you'd better drive home."

The old white horse had not moved, and was evidently glad of the rest. A glance satisfied Tom that the carriage had not been damaged, and, getting into his car, while Andy was brushing the dust from his clothes, our hero started the motor.

There was now room enough to pass around the obstructing carriage, and soon Tom was humming down the road, leaving a much discomfited bully behind him.

"Tom Swift is too smart—thinking he can run everybody, and everything, to suit himself," growled Andy, as he finished dusting off his clothes, and wiping the blood from his face. As Tom had said, the wound was but a scratch, though the bully's head ached, and he felt a little dizzy. "I wish I'd hit him with the horsewhip," he went on, vindictively. "I'll get square with him some day."

Andy had said this many times, but he had never yet succeeded in permanently getting the best of Tom. Pondering on some scheme of revenge the rich lad—for Mr. Foger, his father, was quite wealthy—drove on.

Meanwhile Tom, rather wishing the little encounter had not taken place, but refusing to blame himself for what had occurred, was speeding toward home.

"Let's see," he murmured, as he drove along in his powerful car. "I've got quite a lot to do if I make an early start for Philadelphia, in my airship, to-morrow. I want to tighten the propeller on the shaft a trifle, and give the engine a good try-out. Then, too, I think I'd better make

the landing springs a little stiffer. The last time I made a descent the frame was pretty well jarred up. Yes, if I make that air trip to-morrow I'll have to do some tall hustling when I get home."

The electric runabout swung into the yard of the Swift house, and Tom brought it to a stop opposite the side door. He looked about for a sight of his father, Mrs. Baggert or Garret Jackson. The only person visible was Eradicate Sampson, working in the garden.

"Hello, Rad," called Tom. "Anybody home?"

"Yais, Massa Tom," answered the colored man. "Yo' dad an' anodder gen'mans hab jest gone in de house."

"Who's the other gentleman, Rad?" asked Tom, and the negro, glad of an excuse to cease the weeding of the onion bed, came shuffling forward.

"It's de gen'mans what is allers saying his prayers," he answered.

"Saying his prayers?" repeated Tom.

"Yep. Yo' knows what I means, Massa Tom. He's allers askin' a blessin' on his shoes, or his rubbers, or his necktie."

"Oh, you mean Mr. Wakefield Damon."

"Yais, sah, dat's who I done means. Mr. Wakefull Lemon—dat's sho' him."

At that moment there sounded, within the house, the voices of Mr. Swift, and some one else in conversation.

"And so Tom has decided to make a run to the Quaker City in the *Butterfly,* to-morrow," Mr. Swift was saying, "and he's going to see if he can be of any service to this Mr. Fenwick."

"Bless my watch chain!" exclaimed the other voice. "You don't say so! Why I know Mr. Fenwick very well—he and I used to go to school together, but bless my multiplication tables—I never thought he'd amount to anything! And so he's built an airship; and Tom is going to help him with it? Why, bless my collar button, I've a good notion to go along and see what happens. Bless my very existence, but I think I will!"

"That's Mr. Damon all right," observed Tom, with a smile, as he advanced toward the dining-room, whence the voices proceeded.

"Dat's what I done tole you!" said Eradicate, and, with slow and lagging steps he went back to weed the onion bed.

"How are you, Mr. Damon," called our hero, as he mounted the steps of the porch.

"Why, it's Tom—he's back!" exclaimed the eccentric man. Why, bless my shoe laces, Tom! how are you? I'm real glad to see you. Bless my eyeglasses, but I am! I just returned from

a little western trip, and I thought I'd run over and see how you are. I came in my car—had two blowouts on the way, too. Bless my spark plug, but the kind of tires one gets now-a-days are a disgrace! However, I'm here, and your father has just told me about you going to Philadelphia in your monoplane, to help a fellow-inventor with his airship. It's real kind of you. Bless my topknot if it isn't! Do you know what I was just saying?"

"I heard you mention that you knew Mr. Fenwick," replied Tom, with a smile, as he shook hands with Mr. Damon.

"So I do, and, what's more, I'd like to see his airship. Will your *Butterfly* carry two passengers?"

"Easily, Mr. Damon."

"Then I'll tell you what I'm going to do. If you'll let me I'll take that run to Philadelphia with you!"

"Glad to have you come along," responded Tom, heartily.

"Then I'll go, and, what's more, if Fenwick's ship will rise, I'll go with you in that—bless my deflection rudder if I don't, Tom!" and puffing up his cheeks, as he exploded these words, Mr. Damon fairly raised himself on his tiptoes, and shook Tom's hand again.

CHAPTER V

VOL-PLANING TO EARTH

For a moment after Mr. Damon's announcement Tom did not reply. Mr. Swift, too, seemed a little at a loss for something to say. They did not quite know how to take their eccentric friend at times.

"Of course I'll be glad of your company, Mr. Damon," said Tom; "but you must remember that my *Butterfly* is not like the *Red Cloud.* There is more danger riding in the monoplane than there is in the airship. In the latter, if the engine happens to stop, the sustaining gas will prevent us from falling. But it isn't so in an aeroplane. When your engine stops there——"

"Well, what happens?" asked Mr. Damon, impatiently, for Tom hesitated.

"You have to vol-plane back to earth."

"Vol-plane?" and there was a questioning note in Mr. Damon's voice.

"Yes, glide down from whatever height you

are at when the engine stalls. Come down in a series of dips from the upper currents. Vol-planing, the French call it, and I guess it's as good a word as any."

"Have you ever done it?" asked the odd character.

"Oh, yes, several times."

"Then, bless my fur overcoat! I can do it, too, Tom. When will you be ready to start?"

"To-morrow morning. Now you are sure you won't get nervous and want to jump, if the engine happens to break down?"

"Not a bit of it. I'll vol-plane whenever you are ready," and Mr. Damon laughed.

"Well, we'll hope we won't have to," went on Tom. "And I'll be very glad of your company. Mr. Fenwick will, no doubt, be pleased to see you. I've never met him, and it will be nice to have some one to introduce me. Suppose you come out and see what sort of a craft you are doomed to travel in to-morrow, Mr. Damon. I believe you never saw my new monoplane."

"That's right, I haven't, but I'd be glad to. I declare, I'm getting to be quite an aviator," and Mr. Damon chuckled. A little later, Tom, having informed his father of the sending of the message, took his eccentric friend out to the shop, and exhibited the *Butterfly*.

As many of you have seen the ordinary monoplane, either on exhibition or in flight, I will not take much space to describe Tom's. Sufficient to say it was modeled after the one in which Bleriot made his first flight across the English channel.

The body was not unlike that of a butterfly or dragon fly, long and slender, consisting of a rectangular frame with canvas stretched over it, and a seat for two just aft of the engine and controlling levers. Back of the seat stretched out a long framework, and at the end was a curved plane, set at right angles to it. The ends of the plane terminated in flexible wings, to permit of their being bent up or down, so as to preserve the horizontal equilibrium of the craft.

At the extreme end was the vertical rudder, which sent the monoplane to left or right.

Forward, almost exactly like the front set of wings of the dragon fly, was the large, main plane, with the concave turn toward the ground. There was the usual propeller in front, operated by a four cylinder motor, the cylinders being air cooled, and set like the spokes of a wheel around the motor box. The big gasolene tank, and other mechanism was in front of the right-hand operator's seat, where Tom always rode. He had seldom taken a passenger up with him, though the

machine would easily carry two, and he was a little nervous about the outcome of the trip with Mr. Damon.

"How do you like the looks of it?" asked the young inventor, as he wheeled the *Butterfly* out of the shed, and began pumping up the tires of the bicycle wheels on which it ran over the ground, to get impetus enough with which to rise.

"It looks a little frail, compared to the big *Red Cloud,* Tom," answered the eccentric man, "but I'm going up in her just the same; bless my buttons if I'm not."

Tom could not but admire the grit of his friend.

The rest of the day was busily spent making various adjustments to the monoplane, putting on new wire stays, changing the rudder cables, and tuning up the motor. The propeller was tightened on the shaft, and toward evening Tom announced that all was in readiness for a trial flight.

"Want to come, Mr. Damon?" he asked.

"I'll wait, and see how it acts with you aboard," was the answer. "Not that I'm afraid, for I'm going to make the trip in the morning, but perhaps it won't work just right now."

"Oh, I guess it will," ventured Tom, and in

order to be able to know just how his *Butterfly* was going to behave, with a passenger of Mr. Damon's weight, the young inventor placed a bag of sand on the extra seat.

The monoplane was then wheeled to the end of the starting ground. Tom took his place in the seat, and Mr. Jackson started the propeller. At first the engine failed to respond, but suddenly with a burst of smoke, and a spluttering of fire the cylinders began exploding. The hat of Mr. Damon, who was standing back of the machine, was blown off by the wind created by the propeller.

"Bless my gaiters!" he exclaimed, "I never thought it was as strong as that!"

"Let go!" cried Tom to Mr. Jackson and Eradicate, who were holding back the monoplane from gliding over the ground.

"All right," answered the engineer.

An instant later the explosions almost doubled, for Tom turned on more gasolene. Then, like some live thing, the *Butterfly* rushed across the starting ground. Faster and faster it went, until the young inventor, knowing that he had motion enough, tilted his planes to catch the wind.

Up he went from earth, like some graceful bird, higher and higher, and then, in a big spiral, he began ascending until he was five hundred feet in the air. Up there he traveled back and forth,

in circles, and in figure eights, desiring to test the machine in various capacities.

Suddenly the engine stopped, and to those below, anxiously watching, the silence became almost oppressive, for Tom had somewhat descended, and the explosions had been plainly heard by those observing him. But now they ceased!

"His engine's stalled!" cried Garret Jackson.

Mr. Swift heard the words, and looked anxiously up at his son.

"Is he in any danger?" gasped Mr. Damon.

No one answered him. Like some great bird, disabled in mid flight, the monoplane swooped downward. A moment later a hearty shout from Tom reassured them.

"He shut off the engine on purpose," said Mr. Jackson. "He is vol-planing back to earth!"

Nearer and nearer came the *Butterfly*. It would shoot downward, and then, as Tom tilted the planes, would rise a bit, losing some of the great momentum. In a series of maneuvers like this, the young inventor reached the earth, not far from where his father and the others stood. Down came the *Butterfly,* the springs of the wheel frame taking the shock wonderfully well.

"She's all right—regular bird!" cried Tom, in enthusiasm, when the machine had come to a

stop after rolling over the ground, and he had leaped out. "We'll make a good flight to-morrow, Mr. Damon, if the weather holds out this way."

"Good!" cried the eccentric man. "I shall be delighted."

"They made the start early the next morning, there being hardly a breath of wind. There was not a trace of nervousness noticeable about Mr. Damon, as he took his place in the seat beside Tom. The lad had gone carefully over the entire apparatus, and had seen to it that, as far as he could tell, it was in perfect running order.

"When will you be back, Tom?" asked his father.

"To-night, perhaps, or to-morrow morning. I don't know just what Mr. Fenwick wants me to do. But if it is anything that requires a long stay, I'll come back, and let you know, and then run down to Philadelphia again. I may need some of my special tools to work with. I'll be back to-night perhaps."

"Shall I keep supper for you?" asked Mrs Baggert, the housekeeper.

"I don't know," answered Tom, with a laugh. "Perhaps I'll drop down at Miss Nestor's, and have some apple turnovers," for he had told them

of the incident of hiring the new cook. "Well," he went on to Mr. Damon, "are you all ready?"

"As ready as I ever shall be. Do you think we'll have to do any vol-planing, Tom?"

"Hard to say, but it's not dangerous when there's no wind. All right, Garret. Start her off."

The engineer whirled the big wooden, built-up propeller, and with a rattle and roar of the motor, effectually drowning any but the loudest shouts, the *Butterfly* was ready for her flight. Tom let the engine warm up a bit before calling to his friends to let go, and then, when he had thrown the gasolene lever forward, he shouted a good-by and cried:

"All right! Let go!"

Forward, like a hound from the leash, sprang the little monoplane. It ran perhaps for five hundred feet, and then, with a tilting of the wings, to set the air currents against them, it sprang into the air.

"We're off!" cried Mr. Damon, waving his hand to those on the ground below.

"Yes, we're off," murmured Tom. "Now for the Quaker City!"

He had mapped out a route for himself the night before, and now, picking out the land-

marks, he laid as straight a course as possible for Philadelphia.

The sensation of flying along, two thousand feet high, in a machine almost as frail as a canoe, was not new to Tom. It was, in a degree, to Mr. Damon, for, though the latter had made frequent trips in the large airship, this mode of locomotion, as if he was on the back of some bird, was much different. Still, after the first surprise, he got used to it.

"Bless my finger ring!" he exclaimed, "I like it!"

"I thought you would," said Tom, in a shout, and he adjusted the oil feed to send more lubricant into the cylinders.

The earth stretched out below them, like some vari-colored relief map, but they could not stop to admire any particular spot long, for they were flying fast, and were beyond a scene almost as quickly as they had a glimpse of it.

"How long will it take us?" yelled Mr. Damon into Tom's ear.

"I hope to do it in three hours," shouted back the young inventor.

"What! Why it takes the train over five hours."

"Yes, I know, but we're going direct, and it's only about two hundred and fifty miles. That's

only about eighty an hour. We're doing seventy-five now, and I haven't let her out yet."

"She goes faster than the *Red Cloud*," cried Mr. Damon.

Tom nodded. It was hard work to talk in that rush of air. For an hour they shot along, their speed gradually increasing. Tom called out the names of the larger places they passed over. He was now doing better than eighty an hour as the gage showed. The trip was a glorious one, and the eyes of the young inventor and his friend sparkled in delight as they rushed forward. Two hours passed.

"Going to make it?" fairly howled Mr. Damon.

Tom nodded again.

"Be there in time for dinner," he announced in a shout.

It lacked forty minutes of the three hours when Tom, pointing with one hand down below, while with the other he gripped the lever of the rudder, called:

"North Philadelphia!"

"So soon?" gasped Mr. Damon. "Well, we certainly made speed! Where are you going to land?"

"I don't know," answered the young inventor. "I'll have to pick out the best place I see. It's

no fun landing in a city. No room to run along, after you're down."

"What's the matter with Franklin Field?" cried Mr. Damon. "Out where they play football."

"Good! The very thing!" shouted Tom.

"Mr. Fenwick lives near there," went on Mr. Damon, and Tom nodded comprehendingly.

They were now over North Philadelphia, and, in a few minutes more were above the Quaker City itself. They were flying rather low, and as the people in the streets became aware of their presence there was intense excitement. Tom steered for the big athletic field, and soon saw it in the distance.

With a suddenness that was startling the motor ceased its terrific racket. The monoplane gave a sickening dip, and Tom had to adjust the wing tips and rudder quickly to prevent it slewing around at a dangerous angle.

"What's the matter?" cried Mr. Damon. "Did you shut it off on purpose?"

"No!" shouted Tom. "Something's gone wrong!"

"Gone wrong! Bless my overshoes! Is there any danger?"

"We'll have to vol-plane to earth," answered Tom, and there was a grim look on his face. He had never executed this feat with a passenger

aboard. He was wondering how the *Butterfly* would behave. But he would know very soon, for already the tiny monoplane was shooting rapidly toward the big field, which was now swarming with a curious crowd.

CHAPTER VI

THE NEW AIRSHIP

For a brief instant after the stopping of the motor, and the consequent sudden dropping toward the earth of the monoplane, Tom glanced at Mr. Damon. The latter's face was rather pale, but he seemed calm and collected. His lips moved slightly, and Tom, even in those tense moments, wondered if the odd gentleman was blessing anything in particular, or everything in general.

Tom threw up the tilting plane, to catch more air beneath it, and bring the *Butterfly* in a more parallel position to the earth. This, in a manner, checked the downward flight, and they glided along horizontally for a hundred feet or more.

"Is—is there any great danger, Tom?" asked Mr. Damon.

"I think not," answered the young inventor, confidently. "I have done this same thing before, and from greater heights. The only thing that

bothers me is that there are several cross-currents of air up here, which make it difficult to manage the planes and wing tips. But I think we'll make a good landing."

"Bless my overcoat!" exclaimed Mr. Damon. "I certainly hope so."

Conversation was more easily carried on now, as the motor was not spitting fire and throbbing like a battery of Gatling guns. Tom thought perhaps it might start on the spark, as the propeller was slowly swinging from the force of air against it. He tried, but there was no explosion. He had scarcely hoped for it, as he realized that some part of the mechanism must have broken.

Down they glided, coming nearer and nearer to the earth. The crowd in the big athletic field grew larger. Shouts of wonder and fear could be heard, and people could be seen running excitedly about. To Tom and Mr. Damon they looked like dolls.

Reaching the limit of the parallel glide the monoplane once more shot down on an incline toward the earth with terrible speed. The ground seemed to rush up to meet Mr. Damon.

"Look out!" he cried to Tom. "We're going to hit something!"

"Not yet," was the calm answer. "I'm going to try a new stunt. Hold fast!"

"What are you going to do?"

"Some spirals. I think that will let us down easier, but the craft is likely to tilt a bit, so hold on."

The young inventor shifted the movable planes and rudder, and, a moment later, the *Butterfly* swung violently around, like a polo pony taking a sudden turn after the ball. Mr. Damon slid to one side of his seat, and made a frantic grab for one of the upright supports.

"I made too short a turn!" cried Tom, easing off the craft, which righted itself in an instant. "The air currents fooled me."

Under his skillful guidance, the monoplane was soon slowly approaching the earth in a series of graceful curves. It was under perfect control, and a smile of relief came on the face of the young inventor. Seeing it Mr. Damon took courage, and his hands, which had grasped the uprights with such firmness that his knuckles showed white with the strain, were now removed. He sat easily in his seat.

"We're all right now," declared Tom. "I'll take a couple of forward glides now, and we'll land."

He sent the machine straight ahead. It gathered speed in an instant. Then, with an upward tilt it was slackened, almost as if brakes had been

applied. Once more it shot toward the earth, and once more it was checked by an up-tilted plane.

Then with a thud which shook up the occupants of the two seats, the *Butterfly* came to the ground, and ran along on the three bicycle wheels. Swiftly it slid over the level ground. A more ideal landing place would have been hard to find. Scores of willing hands reached out, and checked the momentum of the little monoplane, and Tom and Mr. Damon climbed from their seats.

The crowd set up a cheer, and hundreds pressed around the aviators. Several sought to reach, and touch the machine, for they had probably never been so close to one before, though airship flights are getting more and more common.

"Where did you come from?"

"Are you trying for a record?"

"How high did you get?"

"Did you fall, or come down on purpose?"

"Can't you start your motor in mid-air?"

These, and scores of other questions were fairly volleyed at Tom and Mr. Damon. The young inventor good-naturedly answered them as best he could.

"We were coming down anyhow," he explained, "but we did not calculate on vol-planing. The motor was stalled, and I had to glide.

Please keep away from the machine. You might damage it."

The arrival of several policemen, who were attracted by the crowd, served to keep the curious ones back away from the *Butterfly,* or the men, boys and women (for there were a number of the latter in the throng) might have caused serious trouble.

Tom made a hasty examination of the motor, and, having satisfied himself that only a minor difficulty had caused it to stop, he decided to put the monoplane in some safe place, and proceed to Mr. Fenwick's house.

The lad was just asking one of the officers if the air craft could not be put in one of the grandstands which surrounded the field, when a voice on the outskirts of the crowd excitedly exclaimed:

"Let me pass, please. I want to see that airship. I'm building one myself, and I need all the experience I can get. Let me in, please."

A man pushed his way into the crowd, and wormed his way to where Tom and Mr. Damon stood. At the sight of him, the eccentric individual cried out:

"Why bless my pocket-knife! If it isn't Mr. Fenwick!"

"Mr. Fenwick?" gasped Tom.

"Yes. The inventor we came to see!"

At the same moment the newcomer cried out:

"Wakefield Damon!"

"That's who I am," answered Tom's friend, "and let me introduce you to Mr. Swift, the inventor of more machines than I can count. He and I were coming to see you, when we had a slight accident, and we landed here. But that didn't matter, for we intended to land here anyhow, as I knew it was near your house. Only we had to vol-plane back to earth, and I can't say that I'd care for that, as a steady diet. Bless my radiator, but I'm glad we've arrived safely."

"Did you come all the way from your home in that?" asked Mr. Fenwick of Tom, as he shook hands with him, and nodded at the monoplane.

"Oh, yes. It's not much of a trip."

"Well, I hope my airship will do as well. But something seems to be wrong with it, and I have hopes that you can help me discover what it is. I know your father, and I have heard much of your ability. That is why I requested your aid."

"I'm afraid I've been much overrated," spoke Tom, modestly, "but I'll do all I can for you. I must now leave my monoplane in a safe place, however."

"I'll attend to that," Mr. Fenwick hastened to assure him. "Leave it to me."

By this time a lieutenant of police, in charge of several reserve officers, had arrived on the scene, for the crowd was now very large, and, as Mr. Fenwick knew this official, he requested that Tom's machine be protected from damage. It was arranged that it could be stored in a large, empty shed, and a policeman would be left on guard. Then, seeing that it was all right, Tom, Mr. Damon and Mr. Fenwick started for the latter's house.

"I am very anxious to show you the *Whizzer,*" said Mr. Fenwick, as they walked along.

"The *Whizzer?*" repeated Tom, wonderingly.

"Yes, that's what I call my electric airship. It hasn't 'whizzed' any to speak of yet, but I have hopes that it will, now that you are here to help me. We will take one of these taxicabs, and soon be at my house. I was out for a stroll, when I saw your monoplane coming down, and I hastened to Franklin Field to see it."

The three entered an automobile, and were soon being driven to the inventor's home. A little later he led them out to a big shed which occupied nearly all of a large lot, in back of Mr. Fenwick's house.

"Does it take up all that room?" asked Tom.

"Oh, yes, the *Whizzer* is pretty good size. There she is!" cried Mr. Fenwick proudly, as

he threw open the doors of the shed, and Tom and Mr. Damon, looking in, saw a large triplane, with a good-sized gas bag hovering over it, and a strange collection of rudders, wings and planes sticking out from either side. Amidships was an enclosed car, or cabin, and a glimpse into it served to disclose to the young inventor a mass of machinery.

"There she is! That's the *Whizzer!*" cried Mr. Fenwick, with pride in his voice. "What do you think of her, Tom Swift?"

Tom did not immediately answer. He looked dubiously at the electric airship and shrugged his shoulders. It seemed to him, at first glance, that it would never sail.

CHAPTER VII

MAKING SOME CHANGES

"WELL, what do you think of it?" asked Mr. Fenwick again, as Tom walked all about the electric airship, still without speaking.

"It's big, certainly," remarked the lad.

"Bless my shoe horn! I should say it was!" burst out Mr. Damon. "It's larger than your *Red Cloud,* Tom."

"But will it go? That's what I want to know," insisted the inventor. "Do you think it will fly, Tom? I haven't dared to try it yet, though a small model which I made floated in the air for some time. But it wouldn't move, except as the wind blew it."

"It would be hard to say, without a careful examination, whether this large one will fly or not," answered Tom.

"Then give it a careful examination," suggested Mr. Fenwick. "I'll pay you well for your time and trouble."

"Oh, if I can help a fellow inventor, and assist in making a new model of airship fly, I'm only too glad to do it without pay," retorted Tom, quickly. "I didn't come here for that. Suppose we go in the cabin, and look at the motor. That's the most important point, if your airship is to navigate."

There was certainly plenty of machinery in the cabin of the *Whizzer*. Most of it was electrical, for on that power Mr. Fenwick intended to depend to sail through space. There was a new type of gasolene engine, small but very powerful, and this served to operate a dynamo. In turn, the dynamo operated an electrical motor, as Mr. Fenwick had an idea that better, and more uniform, power could be obtained in this way, than from a gasolene motor direct. One advantage which Tom noticed at once, was that the *Whizzer* had a large electric storage battery.

This was intended to operate the electric motor in case of a break to the main machinery, and it seemed a good idea. There were various other apparatuses, machines, and appliances, the nature of which Tom could not readily gather from a mere casual view.

"Well, what's your opinion, now that you have seen the motor?" asked Mr. Fenwick, anxiously.

"I'd have to see it in operation," said Tom.

"And you shall, right after dinner," declared the inventor. "I'd like to start it now, and hear what you have to say, but I'm not so selfish as that. I know you must be hungry after your trip from Shopton, as they say aeroplaning gives one an appetite."

"I don't know whether it's that or not," answered Tom with a laugh, "but I am certainly hungry."

"Then we'll postpone the trial until after dinner. It must be ready by this time, I think," said Mr. Fenwick, as he led the way back to the house. It was magnificently furnished, for the inventor was a man of wealth, and only took up aeroplaning as a "fad." An excellent dinner was served, and then the three returned once more to the shed where the *Whizzer* was kept.

"Shall I start the motor in here?" asked Mr. Fenwick, when he had summoned several of the machinists whom he employed, to aid himself and the young inventor.

"It would be better if we could take it outside," suggested Tom, "yet a crowd is sure to gather, and I don't like to work in a mob of people."

"Oh, we can easily get around that," said Mr. Fenwick. "I have two openings to my aeroplane shed. We can take the *Whizzer* out of the rear

door, into a field enclosed by a high fence. That is where I made all my trials, and the crowd couldn't get in, though some boys did find knot-holes and use them. But I don't mind that. The only thing that bothers me is that I can't make the *Whizzer* go up, and if it won't go up, it certainly won't sail. That's my difficulty, and I hope you can remedy it, Tom Swift."

"I'll do the best I can. But let's get the airship outside."

This was soon accomplished, and in the open lot Tom made a thorough and careful examination of the mechanism. The motor was started, and the propellors, for there were two, whirled around at rapid speed.

Tom made some tests and calculations, at which he was an expert, and applied the brake test, to see how much horse power the motor would deliver.

"I think there is one trouble that we will have to get over," he finally said to Mr. Fenwick.

"What is that?"

"The motor is not quite powerful enough because of the way in which you have it geared up. I think by changing some of the cogs, and getting rid of the off-set shaft, also by increasing the number of revolutions, and perhaps by using a

new style of carburetor, we can get more speed and power."

"Then we'll do it!" cried Mr. Fenwick, with enthusiasm. "I knew I hadn't got everything just right. Do you think it will work after that?"

"Well," remarked Tom, hesitatingly, "I think the arrangement of the planes will also have to be changed. It will take quite some work, but perhaps, after a bit, we can get the *Whizzer* up in the air."

"Can you begin work at once?" asked the inventor, eagerly.

Tom shook his head.

"I can't stay long enough on this trip," he said. "I promised father I would be back by to-morrow at the latest, but I will come over here again, and arrange to stay until I have done all I can. I need to get some of my special tools, and then, too, you will require some other supplies, of which I will give you a list. I hope you don't mind me speaking in this way, Mr. Fenwick, as though I knew more about it than you do," added Tom, modestly.

"Not a bit of it!" cried the inventor heartily. "I want the benefit of your advice and experience, and I'll do just as you say. I hope you can come back soon."

"I'll return the first of the week," promised

Tom, "and then we'll see what can be done. Now I'll go over the whole ship once more, and see what I need. I also want to test the lifting capacity of your gas bag."

The rest of the day was a busy one for our hero. With the aid of Mr. Damon and the owner of the *Whizzer,* he went over every point carefully. Then, as it was too late to attempt the return flight to Shopton, he telegraphed his father, and he and Mr. Damon remained over night with Mr. Fenwick.

In the morning, having written out a list of the things that would be needed, Tom went out to Franklin Field, and repaired his own monoplane. It was found that one of the electric wires connected with the motor had broken, thus cutting off the spark. It was soon repaired, and, in the presence of a large crowd, Tom and Mr. Damon started on their return flight.

"Do you think you can make the *Whizzer* work, Tom?" asked Mr. Damon, as they were flying high over Philadelphia.

"I'm a little dubious about it," was the reply. "But after I make some changes I may have a different opinion. The whole affair is too big and clumsy, that's the trouble; though the electrical part of it is very good."

Shopton was reached without incident, in about

three hours, and there was no necessity, this time, of vol-planing back to earth. After a short rest, Tom began getting together a number of special tools and appliances, which he proposed taking back to Philadelphia with him.

The young inventor made another trip to Mr. Fenwick's house the first of the following week. He went by train this time, as he had to ship his tools, and Mr. Damon did not accompany him. Then, with the assistance of the inventor of the *Whizzer,* and several of his mechanics, Tom began making the changes on the airship.

"Do you think you can make it fly?" asked Mr. Fenwick, anxiously, after several days of labor.

"I hope so," replied our hero, and there was more confidence in his tone than there had been before. As the work progressed, he began to be more hopeful. "I'll make a trial flight, anyhow, in a few days," he added.

"Then I must send word to Mr. Damon," decided Mr. Fenwick. "He wants to be on hand to see it, and, if possible, go up; so he told me."

"All right," assented Tom. "I only hope it *does* go up," he concluded, in a low tone.

CHAPTER VIII

ANDY FOGER'S REVENGE

DURING the following week, Tom was kept busy over the airship. He made many important changes, and one of these was to use a new kind of gas in the balloon bag. He wanted a gas with a greater lifting power than that of the ordinary illuminating vapor which Mr. Fenwick had used.

"Well," remarked Tom, as he came from the airship shed one afternoon, "I think we can give it a try-out, Mr. Fenwick, in a few days more. I shall have to go back to Shopton to get some articles I need, and when I come back I will bring Mr. Damon with me, and we will see what the *Whizzer* can do."

"Do you mean we will make a trial flight?"

"Yes."

"For how long a distance?"

"It all depends on how she behaves," answered Tom, with a smile. "If possible, we'll make a long flight."

"Then I'll tell you what I'm going to do," went on the inventor, "I'm going to put aboard a stock of provisions, and some other supplies and stores, in case we are two or three days in the air."

"It might not be a bad plan," agreed Tom, "though I hardly think we will be gone as long as that."

"Well, being out in the air always makes me hungry," proceeded Mr. Fenwick, "so I'm going to take plenty of food along."

The time was to come, and that very soon, when this decision of the inventor of the *Whizzer* stood the adventurers in good stead.

Tom returned to Shopton the next day, and sent word to have Mr. Damon join him in time to go back to the Quaker City two days later.

"But why don't you start right back to Philadelphia to-morrow," asked Mr. Swift of his son.

"Because," answered Tom, and that was all the reason he would give, though had any one seen him reading a certain note a few minutes before that, which note was awaiting him on his arrival from the Quaker City, they would not have wondered at his decision.

The note was brief. It merely said:

"Won't you come, and have some apple turn-

overs? The new cook is a treasure, and the girls are anxious to meet you."

It was signed: Mary Nestor.

"I think I *could* enjoy some apple turnovers," remarked Tom, with a smile.

Having gotten ready the few special appliances he wished to take back to Philadelphia with him, Tom went, that evening, to call on Miss Nestor. True to her promise, the girl had a big plate full of apple turnovers, which she gaily offered our hero on his arrival, and, on his laughing declination to partake of so many, she ushered him into a room full of pretty girls, saying:

"They'll help you eat them, Tom. Girls, here is Mr. Swift, who doesn't mind going up in the air or under the ocean, or even catching runaway horses," by which last she referred to the time Tom saved her life, and first made her acquaintance.

As for the young inventor, he gave a gasp, almost as if he had plunged into a bath of icy water, at the sight of so many pretty faces staring at him. He said afterward that he would rather have vol-planed back to earth from a seven-mile height, than again face such a battery of sparkling eyes.

But our hero soon recovered himself, and entered into the merriment of the evening, and,

before he knew it he was telling Miss Nestor and her attractive guests something of his exploits.

"But I'm talking altogether too much about myself," he said, finally. "How is the new cook Miss Nestor; and have you heard from your father and mother since they sailed on the *Resolute* for the West Indies?"

"As to the new cook, she is a jewel of the first water," answered Miss Nestor. "We all like her, and she is anxious for another ride in a taxicab, as she calls your auto."

"She shall have it," declared Tom, "for those are the best apple turnovers I ever ate."

"I'll tell her so," declared Mary. "She'll appreciate it—coming from an inventor of your ability."

"Have you heard from your parents?" asked Tom, anxious to change the subject.

"Oh, yes. I had a wire to-day. They stopped at St. Augustine to let me know they were having a glorious time aboard the yacht. Mr. Hosbrook, the owner, is an ideal host, mamma said. They are proceeding directly to the West Indies, now. I do hope they will arrive safely. They say there are bad storms down there at this time of year."

"Perhaps, if they are shipwrecked, Mr. Swift

will go to their rescue in one of his airships, or a submarine," suggested Mabel Jackson, one of the several pretty girls.

"Oh, I hope he doesn't have to!" exclaimed Mary. "Don't speak of shipwrecks! It makes me shudder," and she seemed unduly alarmed.

"Of course they won't have any trouble," asserted Tom, confidently, more to reassure Miss Nestor, than from any knowledge he possessed; "but if they do get cast away on a desert island, I'll certainly go to their rescue," he added.

It was late when Tom started for home that night, for the society of Miss Nestor and her friends made the time pass quickly. He promised to call again, and try some more samples of the new cook's culinary art, as soon as he had gotten Mr. Fenwick's airship in shape for flying.

As, later that night, the young inventor came in sight of his home, and the various buildings and shops surrounding it, his first glance was toward the shed which contained his monoplane, *Butterfly*. That little craft was Tom's pet. It had not cost him anything like as much as had his other inventions, either in time or money, but he cared more for it than for his big airship, *Red Cloud*. This was principally because the *Butterfly* was so light and airy, and could be gotten ready so quickly for a flight across coun-

try. It was capable of long endurance, too, for an extra large supply of gasolene and oil was carried aboard.

So it was with rather a start of surprise that Tom saw a light in the structure where the *Butterfly* was housed.

"I wonder if dad or Mr. Jackson can be out there?" he mused. "Yet, I don't see why they should be. They wouldn't be going for a flight at night. Or perhaps Mr. Damon arrived, and is out looking it over."

A moment's reflection, however, told Tom that this last surmise could not be true, since the eccentric man had telegraphed, saying he would not arrive until the next day.

"Somebody's out there, however," went on Tom, "and I'm going to see who it is. I hope it isn't Eradicate monkeying with the monoplane. He's very curious, and he might get it out of order."

Tom increased his pace, and moved swiftly but softly toward the shed. If there was an intruder inside he wanted to surprise him. There were large windows to the place, and they would give a good view of the interior. As Tom approached, the light within flickered, and moved to and fro.

Tom reached one of the casements, and peered in. He caught a glimpse of a moving figure, and he heard a peculiar ripping sound. Then, as he sprang toward the front door, the light suddenly went out, and the young inventor could hear some one running from the shop.

"They've seen me, and are trying to get away," thought the lad. "I must catch them!"

He fairly leaped toward the portal, and, just as he reached it, a figure sprang out. So close was Tom that the unknown collided with him, and our hero went over on his back. The other person was tossed back by the force of the impact, but quickly recovered himself, and dashed away.

Not before, however, Tom had had a chance to glance at his face, and, to the chagrin of the young inventor, he recognized, by the dim light of a crescent moon, the countenance of Andy Foger! If additional evidence was needed Tom fully recognized the form as that of the town bully.

"Hold on there, Andy Foger!" shouted the young inventor. "What are you doing in my shed? What right have you in there? What did you do?"

Back came the answer through the night:

"I told you I'd get square with you, and I've done it," and then Andy's footsteps died away, while a mocking laugh floated back to Tom. What was Andy's revenge?

CHAPTER IX

THE WHIZZER FLIES

For a moment, Tom gazed after the fleeting figure of the cowardly bully. He was half-minded to give pursuit, and then, realizing that he could find Andy later if he wanted him, the young inventor decided his best plan would be to see what damage had been done. For that damage would follow Andy's secret visit to the shop, Tom was certain.

Nor was his surmise wrong. Stepping into the building, the lad switched on the lights, and he could not repress an exclamation of chagrin as he looked toward his trim little monoplane, the *Butterfly*.

Now it was a *Butterfly* with broken wings, for Andy had slashed the canvas of the planes in a score of places.

"The scoundrel!" growled Tom. "I'll make him suffer for this! He's all but ruined my aeroplane."

Tom walked around his pet machine. As he came in front, and saw the propeller, he gave another exclamation. The fine wooden blades of several layers, gracefully curved, which had cost him so much in time and labor to build up, and then fashion to the right shape, had been hacked, and cut with an axe. The propeller was useless!

"More of Andy's work," murmured Tom. "This is about the worst yet!"

There came over him a feeling of great despondency, which was succeeded by a justifiable rage. He wanted to take after the bully, and give him a merciless beating. Then a calmer mood came over Tom.

"After all, what's the use?" he reasoned. "Whipping Andy wouldn't mend the *Butterfly*. She's in bad shape, but I can repair her, when I get time. Luckily, he didn't meddle with the engine. That's all right." A hasty examination had shown this. "I guess I won't do anything now," went on Tom. "I'll have my hands full getting Mr. Fenwick's airship to run. After that I can come back here and fix up my own. It's a good thing I don't have to depend on her for making the trip to Philadelphia. Poor *Butterfly!* you sure are in a bad way," and Tom felt almost as if he was talking to some living crea-

ture, so wrapped up was he in his trim little monoplane.

After another disheartening look at his air craft, the young inventor started to leave the shop. He looked at a door, the fastening of which Andy had broken to gain admittance.

"I should have had the burglar alarm working, and this would never have happened," reasoned Tom. All the buildings were arranged so that if any one entered them after a certain hour, an alarm would ring in the house. But of late, the alarm had not been set, as Tom and his father were not working on any special inventions that needed guarding. It was due to this oversight that Andy was able to get in undetected.

"But it won't happen again," declared Tom, and he at once began connecting the burglar-apparatus. He went into the house, and told his father and the engineer what had occurred. They were both indignant, and the engineer declared that he would sleep with one eye open all night, ready to respond to the first alarm."

"Oh, there's no danger of Andy coming back right away," said Tom. "He's too frightened. I wouldn't be surprised if he disappeared for a time. He'll be thinking that I'm after him."

This proved true, as Andy had left town next

morning, and to all inquiries his mother said he had gone to visit relatives. She was not aware of her son's meanness, and Tom did not tell her.

Mr. Damon arrived from his home in Waterfield that day, and, with many "blessings," wanted to know if Tom was ready for the trial of the electrical airship.

"Yes, we'll leave for Philadelphia to-morrow," was the answer.

"Are we going in the *Butterfly?* Bless my watch chain, but I like that little machine!"

"It will be some time before you again have a flight in her," said Tom, sorrowfully, as he told of Andy's act of vandalism.

"Why, bless my individuality!" cried Mr. Damon, indignantly. "I never heard of such a thing! Never!"

It did little good to talk of it, however, and Tom wanted to forget about it. He wished he had time to repair the monoplane before he left home, but there was much to do to get ready for the trial of the *Whizzer.*

"When will you be back, Tom?" asked Mr. Swift, as his son and Mr. Damon departed for the Quaker City the following morning.

"Hard to say, dad. If I can make a long flight

in the *Whizzer* I'll do so. I may even drop down here and pay you a visit. But if I find there are many more changes to make in her construction, which is more than likely, I can't say when I'll return. I'll keep you posted, however, by writing."

"Can't you arrange to send me some wireless messages?" asked the older inventor, with a smile.

"I could, if I had thought to rig up the apparatus on Mr. Fenwick's airship," was the reply. "I'll hardly have time to do it now, though."

"Send wireless messages from an aeroplane?" gasped Mr. Damon. "Bless my gizzard! I never heard of such a thing!"

"Oh, it can be done," Tom assured him. And this was a fact. Tom had installed a wireless apparatus on his *Red Cloud* recently, and it is well known that several of the modern biplanes can send wireless messages. The crossing and bracing wires of the frame are used for sending wires, and in place of ground conductors there are trailers which hang below the aeroplane. The current is derived directly from the engine, and the remaining things needed are a small step-up transformer, a key and a few other small parts. Tom had gone a step farther than this, and had

also arranged to receive wireless messages, though few modern aeroplanes are thus equipped as yet.

But, of course, there was no time now to install a wireless apparatus on Mr. Fenwick's craft. Tom thought he would be lucky if he got the *Whizzer* to make even a short flight.

"Well, let me hear from you when you can," requested Mr. Swift, and Tom promised. It was some time after that, and many strange things happened before Tom Swift again communicated with his father, at any length.

The young inventor had bidden farewell to Miss Nestor the night previous. She stated that she had a message that day from her parents aboard the *Resolute,* which spoke a passing steamer. Mr. and Mrs. Nestor, and the other guests of Mr. Hosbrook were well, and anticipated a fine time on reaching the West Indies.

Tom now said good-by to his father, the housekeeper and Mr. Jackson, not forgetting, of course, Eradicate Sampson.

"Don't let Andy Foger come sneaking around here, Rad," cautioned the young inventor.

"'Deed an' I won't!" exclaimed the colored man. "Ef he do, I'll hab Boomerang kick him t' pieces, an' den I'll whitewash him so his own

folks won't know him! Oh, don't you worry, Massa Tom. Dat Andy won't do no funny business when I'm around!"

Tom laughed, and started for the station with Mr. Damon. They arrived in Philadelphia that afternoon, the trip being very slow, as compared with the one made by the monoplane. They found Mr. Fenwick anxiously awaiting them, and Tom at once started work on the airship.

He kept at it until late that night, and resumed early the next morning. Many more changes and adjustments were made, and that afternoon, the young inventor said:

"I think we'll give it a try-out, Mr. Fenwick."

"Do you mean make a flight?"

"Yes, if she'll take it; but only a short one. I want to get her up in the air, and see how she behaves."

"Well, if you find out, after you're up, that she does well, you may want to take a long flight," suggested Mr. Fenwick. "If you do, why I have everything aboard necessary for a long voyage. The *Whizzer* is well stocked with provisions."

An hour later, the big electric machine was wheeled out into the yard, for, in spite of her size, four men could easily move the craft about, so well was she balanced. Aside from a few

personal friends of the inventor, himself, his machinists, Tom and Mr. Damon, no one was present at the try-out.

Tom, Mr. Damon and Mr. Fenwick climbed into the car which was suspended below the gas bag, and between the wing-like planes on either side. The young inventor had decided to make the *Whizzer* rise by scudding her across the ground on the bicycle wheels, with which she was equipped, and then by using the tilting planes to endeavor to lift her off the earth. He wanted to see if she would go up that way, without the use of the gas bag.

All was in readiness. The motor was started and the machinery began to hum and throb. The propellers gained speed with every revolution. The airship had been made fast by a rope, to which was attached a strong spring balance, as it was desired to see how much pull the engine would give.

"Eight hundred pounds," announced one of the machinists.

"A thousand would be better, but we'll try it," murmured Tom. "Cast off!"

The rope was loosened, and, increasing the speed of the engine, Tom signalled to the men to give a little momentum to the craft. She began running over the smooth ground. There

was a cheer from the few spectators. Certainly the *Whizzer* made good time on the earth.

Tom was anxiously watching the gages and other instruments. He wanted a little more speed, but could not seem to get it. He ran the motor to the utmost, and then, seeing the necessity of making an attempt to get up into the air, before the end of the speeding ground was reached, he pulled the elevating plane lever.

The front of the *Whizzer* rose, and then settled down. Tom quickly shut off the power, and jammed on the brake, an arrangement of spikes that dug into the earth, for the high board fence loomed up before him.

"What's the matter?" cried Mr. Fenwick, anxiously.

"Couldn't get up speed enough," answered the young inventor. "We must have more momentum to make her rise."

"Can it be gotten?"

"I think so. I'll gear the motor higher."

It took an hour to do this. Once more the scale test was applied. It registered a pull of fifteen hundred pounds now.

"We'll go up," said Tom, grimly.

Once more the motors spit out fire, and the propellers whirled so that they looked like mere circles of light. Once more the *Whizzer* shot

over the ground, but this time, as she neared the fence, she rose up like a bird, cleared it like a trick horse, and soared off into the air!

The *Whizzer* was flying!

CHAPTER X

OVER THE OCEAN

"HURRAH!" cried Mr. Fenwick in delight. "My machine is really flying at last!"

"Yes," answered Tom, as he adjusted various levers and gears, "she is going. It's not as high as I'd like, but it is doing very well, considering the weight of the craft, and the fact that we have not used the gas bag. I'm going to let that fill now, and we'll go up. Don't you want to steer, Mr. Fenwick?"

"No, you manage it, Tom, until it's in good running shape. I don't want to 'hoodoo' it. I worked as hard as I could, and never got more than two feet off the ground. Now I'm really sailing. It's great!"

He was very enthusiastic, and Tom himself was not a little pleased at his own success, for certainly the airship had looked to be a very dubious proposition at first.

"Bless my gaiters! But we are doing pretty

well," remarked Mr. Damon, looking down on the field where Mr. Fenwick's friends and the machinists were gathered, cheering and waving their hands.

"We'll do better," declared Tom.

He had already set the gas machine in operation, and was now looking over the electric apparatus, to see that it was working well. It needed some adjustments, which he made.

All this while the *Whizzer* was moving about in a big circle, for the rudder had been automatically set to so swing the craft. It was about two hundred feet high, but soon after the gas began to enter the bag it rose until it was nearly five thousand feet high. This satisfied Tom that the airship could do better than he expected, and he decided to return nearer earth.

In going down, he put the craft through a number of evolutions designed to test her ability to answer the rudders promptly. The lad saw opportunity for making a number of changes, and suggested them to Mr. Fenwick.

"Are you going any farther?" asked the owner of the *Whizzer,* as he saw that his craft was slowly settling.

"No, I think we've done enough for the first day," said Tom. "But I'd like you to handle her

now, Mr. Fenwick. You can make the landing, while I watch the motor and other machines."

"Yes, I guess I can make a landing all right," assented the inventor. "I'm better at coming down than going up."

He did make a good descent, and received the congratulation of his friends as he stepped from the airship. Tom was also given much praise for his success in making the craft go at all, for Mr. Fenwick and his acquaintances had about given up hope that she ever would rise.

"Well, what do you think of her?" Mr. Fenwick wanted to know of the young inventor, who replied that, as soon as some further changes had been made, they would attempt a long flight.

This promise was kept two days later. They were busy days for Tom, Mr. Fenwick and the latter's assistants. Tom sent a short note to his father telling of the proposed long flight, and intimated that he might make a call in Shopton if all went well. He also sent a wire to Miss Nestor, hinting that she might have some apple turnovers ready for him.

But Tom never called for that particular pastry, though it was gotten ready for him when the girl received his message.

All was in readiness for the long flight, and a preliminary test had demonstrated that the

Whizzer had been wonderfully improved by the changes Tom made. The young inventor looked over the supply of food Mr. Fenwick had placed aboard, glanced at the other stores, and asked:

"How long do you expect to be gone, Mr. Fenwick?"

"Why, don't you think we can stay out a week?"

"That's quite a while," responded Tom. "We may be glad to return in two days, or less. But I think we're all ready to start. Are any of your friends going?"

"I've tried to pursuade some of them to accompany me, but they are a bit timid," said the inventor. "I guess we three will make up the party this time, though if our trip is a successful one I'll be overwhelmed with requests for rides, I suppose."

As before, a little crowd gathered to see the start. The day was warm, but there was a slight haziness which Tom did not like. He hoped, though, that it would pass over before they had gone far.

"Do you wish to head for any particular spot, Mr. Fenwick?" asked Tom, as they were entering the cabin.

"Yes, I would like to go down and circle Cape May, New Jersey, if we could. I have a friend

who has a summer cottage there, and he was always laughing at my airship. I'd just like to drop down in front of his place now, and pay him a call."

"We'll try it," assented Tom, with a smile.

An auspicious start was made, the *Whizzer* taking the air after a short flight across the ground, and then, with the lifting gas aiding in pulling the craft upward, the airship started to sail high over the city of Philadelphia.

So swiftly did it rise that the cheers of the little crowd of Mr. Fenwick's friends were scarcely heard. Up and up it went, and then a little later, to the astonishment of the crowds in the streets, Tom put the airship twice in a circle around the statue of William Penn, on the top of the City Hall.

"Now you steer," the lad invited Mr. Fenwick. "Take her straight across the Delaware River, and over Camden, New Jersey, and then head south, for Cape May. We ought to make it in an hour, for we are getting up good speed."

Leaving the owner in charge of his craft, to that gentleman's no small delight, Tom and Mr. Damon began an inspection of the electrical and other machinery. There was much that needed attention, but Tom soon had the automatic ap-

paratus in working order, and then less attention need be given to it.

Several times the young inventor looked out of the windows with which the cabin was fitted. Mr. Damon noticed this.

"Bless my shoe laces, Tom," he said. "What's the matter?"

"I don't like the looks of the weather," was the answer. "I think we're in for a storm."

"Then let's put back."

"No, it would be too bad to disappoint Mr. Fenwick, now that we have made such a good start. He wants to make a long flight, and I can't blame him," spoke Tom, in a low voice.

"But if there's danger——"

"Oh, well, we can soon be at Cape May, and start back. The wind is freshening rather suddenly, though," and Tom looked at the anemometer, which showed a speed of twenty miles an hour. However, it was in their favor, aiding them to make faster time.

The speed of the *Whizzer* was now about forty miles an hour, not fast for an air craft, but sufficiently speedy in trying out a new machine. Tom looked at the barograph, and noted that they had attained an altitude of seven thousand five hundred feet.

"That's better than millionaire Daxtel's dis-

tance of seven thousand one hundred and five feet," remarked the lad, with a smile, "and it breaks Jackson's climb of seven thousand three hundred and three feet, which is pretty good for your machine, Mr. Fenwick."

"Do you really think so?" asked the pleased inventor.

"Yes. And we'll do better than that in time, but it's best to go slow at first, until we see how she is standing the strain. This is high and fast enough for the present."

They kept on, and as Tom saw that the machinery was working well, he let it out a little. The *Whizzer* at once leaped forward, and, a little later they came within sight of Cape May, the Jersey coast resort.

"Now to drop down and visit my friend," said Mr. Fenwick, with a smile. "Won't he be surprised!"

"I don't think we'd better do it," said Tom.

"Why not?"

"Well, the wind is getting stronger every minute and it will be against us on the way back. If we descend, and try to make another ascension we may fail. We're up in the air now, and it may be easy to turn around and go back. Then, again, it may not, but it certainly will be easier to shift around up here than down on the ground.

So I'd rather not descend—that is, not entirely to the ground."

"Well, just as you say, though I wanted my friend to know I could build a successful airship."

"Oh, we can get around that. I'll take her down as low as is safe, and fly over his house, if you'll point it out, and you can drop him a message in one of the pasteboard tubes we carry for that purpose."

"That's a good idea," assented Mr. Fenwick. "I'll do it."

Tom sent the *Whizzer* down until the hotels and cottages could be made out quite plainly. After looking with a pair of opera glasses, Mr. Fenwick picked out the residence of his friend, and Tom prepared to circle about the roof.

By this time the presence of the airship had become known to hundreds, and crowds were eagerly watching it.

"There he is! There's my friend who didn't believe I would ever succeed!" exclaimed Mr. Fenwick, pointing to a man who stood in the street in front of a large, white house. "I'll drop him a message!"

One was in readiness in a weighted pasteboard cylinder, and soon it was falling downward. The

airship was moving slowly, as it was beating against the wind.

Leaning out of the cabin window, Mr. Fenwick shouted to his friend:

"Hey, Will! I thought you said my airship would never go! I'll come and give you a ride, some day!"

Whether the gentleman understood what Mr. Fenwick shouted at him is doubtful, but he saw the inventor waving his hand, and he saw the falling cylinder, and a look of astonishment spread over his face, as he ran to pick up the message.

"We're going up now, and will try to head for home," said Tom, a moment later, as he shifted the rudder.

"Bless my storage battery!" cried Mr. Damon. "But we have had a fine trip."

"A much better one than we'll have going back," observed Tom, in a low voice.

"Why; what's the matter?" asked the eccentric man.

"The wind has increased to a gale, and will be dead against us," answered Tom.

Mr. Fenwick was busy writing another message to drop, and he paid little attention to the young inventor. Tom sent the craft well up into the air, and then tried to turn it about, and head

back for Philadelphia. No sooner had he done so than the airship was met by the full force of the wind, which was now almost a hurricane. It had steadily increased, but, as long as they were moving with it, they did not notice it so much. Once they attempted to stem its fury they found themselves almost helpless.

Tom quickly realized this, and, giving up his intention of beating up against the wind, he turned the craft around, and let it fly before the gale, the propellers aiding to get up a speed of seventy miles an hour.

Mr. Fenwick, who had dropped the last of his messages, came from his small private cabin, to where Mr. Damon and Tom were in a low-voiced conversation near the engines. The owner of the *Whizzer,* happened to look down through a plate-glass window in the floor of car. What he saw caused him to give a gasp of astonishment.

"Why—why!" he exclaimed. "We—we're over the ocean."

"Yes," answered Tom, quietly, as he gazed down on the tumbling billows below them. They had quickly passed over Cape May, across the sandy beach, and were now well out over the Atlantic.

"Why—why are we out here?" asked Mr. Fen-

wick. "Isn't it dangerous—in an airship that hasn't been thoroughly tried yet?"

"Dangerous? Yes, somewhat," replied Tom, slowly. "But we can't help ourselves, Mr. Fenwick. We can't turn around and go back in this gale, and we can't descend."

"Then what's to be done?"

"Nothing, except to keep on until the gale blows itself out."

"And how long will that be?"

"I don't know—a week, maybe."

"Bless my coffee pot, I'm glad we've got plenty on board to eat!" exclaimed Mr. Damon.

CHAPTER XI

A NIGHT OF TERROR

AFTER the first shock of Tom's announcement, the two men, who were traveling with him in the airship, showed no signs of fear. Yet it was alarming to know that one was speeding over the mighty ocean, before a terrific gale, with nothing more substantial under one that a comparatively frail airship.

Still Mr. Damon knew Tom of old, and had confidence in his ability, and, while Mr. Fenwick was not so well acquainted with our hero, he had heard much about him, and put faith in his skill to carry them out of their present difficulty.

"Are you sure you can't turn around and go back?" asked Mr. Fenwick. His knowledge of air-currents was rather limited.

"It is out of the question," replied Tom, simply. "We would surely rip this craft to pieces if we attempted to buffet this storm."

"Is it so bad, then?" asked Mr. Damon, for-

getting to bless anything in the tense excitement of the moment.

"It might be worse," was the reply of the young inventor. "The wind is blowing about eighty miles an hour at times, and to try to turn now would mean that we would tear the planes loose from the ship. True, we could still keep up by means of the gas bag, but even that might be injured. Going as we are, in the same direction as that in which the wind is blowing, we do not feel the full effect of it."

"But, perhaps, if we went lower down, or higher up, we could get in a different current of air," suggested Mr. Fenwick, who had made some study of aeronautics.

"I'll try," assented Tom, simply. He shifted the elevating rudder, and the *Whizzer* began to go up, slowly, for there was great lateral pressure on her large surface. But Tom knew his business, and urged the craft steadily. The powerful electric engines, which were the invention of Mr. Fenwick, stood them in good stead, and the barograph soon showed that they were steadily mounting.

"Is the wind pressure any less?" inquired Mr. Damon, anxiously.

On the contrary, it seems to be increasing,"

replied Tom, with a glance at the anemometer. "It's nearly ninety miles an hour now."

"Then, aided by the propellers, we must be making over a hundred miles an hour," said the inventor.

"We are,—a hundred and thirty," assented Tom.

"We'll be blown across the ocean at this rate," exclaimed Mr. Damon. "Bless my soul! I didn't count on that."

"Perhaps we had better go down," suggested Mr. Fenwick. "I don't believe we can get above the gale."

"I'm afraid not," came from Tom. "It may be a bit better down below."

Accordingly, the rudder was changed, and the *Whizzer* pointed her nose downward. None of the lifting gas was let out, as it was desired to save that for emergencies.

Down, down, down, went the great airship, until the adventurers within, by gazing through the plate glass window in the floor of the cabin, could see the heaving, white-capped billows, tossing and tumbling below them.

"Look out, or we'll be into them!" shouted Mr. Damon.

"I guess we may as well go back to the level where we were," declared Tom. "The wind,

both above and below that particular strata is stronger, and we will be safer up above. Our only chance is to scud before it, until it has blown itself out. And I hope it will be soon."

"Why?" asked Mr. Damon, in a low voice.

"Because we may be blown so far that we can not get back while our power holds out, and then——" Tom did not finish, but Mr. Damon knew what he meant—death in the tossing ocean, far from land, when the *Whizzer,* unable to float in the air any longer, should drop into the storm-enraged Atlantic.

They were again on a level, where the gale blew less furiously than either above or below, but this was not much relief. It seemed as if the airship would go to pieces, so much was it swayed and tossed about. But Mr. Fenwick, if he had done nothing else, had made a staunch craft, which stood the travelers in good stead.

All the rest of that day they swept on, at about the same speed. There was nothing for them to do, save watch the machinery, occasionally replenishing the oil tanks, or making minor adjustments.

"Well," finally remarked Mr. Damon, when the afternoon was waning away, "if there's nothing else to do, suppose we eat. Bless my appetite,

but I'm hungry! and I believe you said, Mr. Fenwick, that you had plenty of food aboard."

"So we have, but the excitement of being blown out to sea on our first real trip, made me forget all about it. I'll get dinner at once, if you can put up with an amateur's cooking."

"And I'll help," offered Mr. Damon. "Tom can attend to the airship, and we'll serve the meals. It will take our minds off our troubles."

There was a well equipped kitchen aboard the *Whizzer* and soon savory odors were coming from it. In spite of the terror of their situation, and it was not to be denied that they were in peril, they all made a good meal, though it was difficult to drink coffee and other liquids, owing to the sudden lurches which the airship gave from time to time as the gale tossed her to and fro.

Night came, and, as the blackness settled down, the gale seemed to increase in fury. It howled through the slender wire rigging of the *Whizzer*, and sent the craft careening from side to side, and sometimes thrust her down into a cavern of the air, only to lift her high again, almost like a ship on the heaving ocean below them.

As darkness settled in blacker and blacker, Tom had a glimpse below him, of tossing lights on the water.

"We just passed over some vessel," he an-

nounced. "I hope they are in no worse plight than we are." Then, there suddenly came to him a thought of the parents of Mary Nestor, who were somewhere on the ocean, in the yacht *Resolute* bound for the West Indies.

"I wonder if they're out in this storm, too?" mused Tom. "If they are, unless the vessel is a staunch one, they may be in danger."

The thought of the parents of the girl he cared so much for being in peril, was not reassuring to Tom, and he began to busy himself about the machinery of the airship, to take his mind from the presentiment that something might happen to the *Resolute.*

"We'll have our own troubles before morning," the lad mused, "if this wind doesn't die down."

There was no indication that this was going to be the case, for the gale increased rather than diminished. Tom looked at their speed gage. They were making a good ninety miles an hour, for it had been decided that it was best to keep the engine and propellers going, as they steadied the ship.

"Ninety miles an hour," murmured Tom. "And we've been going at that rate for ten hours now. That's nearly a thousand miles. We are quite a distance out to sea."

He looked at a compass, and noted that, instead of being headed directly across the Atlantic they were bearing in a southerly direction.

"At this rate, we won't come far from getting to the West Indies ourselves," reasoned the young inventor. "But I think the gale will die away before morning."

The storm did not, however. More fiercely it blew through the hours of darkness. It was a night of terror, for they dared not go to sleep, not knowing at what moment the ship might turn turtle, or even rend apart, and plunge with them into the depths of the sea.

So they sat up, occasionally attending to the machinery, and noting the various gages. Mr. Damon made hot coffee, which they drank from time to time, and it served to refresh them.

There came a sudden burst of fury from the storm, and the airship rocked as if she was going over.

"Bless my heart!" cried Mr. Damon, springing up. "That was a close call!"

Tom said nothing. Mr. Fenwick looked pale and alarmed.

The hours passed. They were swept ever onward, at about the same speed, sometimes being whirled downward, and again tossed upward at

the will of the wind. The airship was well-nigh helpless, and Tom, as he realized their position, could not repress a fear in his heart as he thought of the parents of the girl he loved being tossed about on the swirling ocean, in a frail pleasure yacht.

CHAPTER XII

A DOWNWARD GLIDE

THEY sat in the cabin of the airship, staring helplessly at each other. Occasionally Tom rose to attend to one of the machines, or Mr. Fenwick did the same. Occasionally, Mr. Damon uttered a remark. Then there was silence, broken only by the howl of the gale.

It seemed impossible for the *Whizzer* to travel any faster, yet when Tom glanced at the speed gage he noted, with a feeling of surprise, akin to horror, that they were making close to one hundred and fifty miles an hour. Only an aeroplane could have done it, and then only when urged on by a terrific wind which added to the speed produced by the propellers.

The whole craft swayed and trembled, partly from the vibration of the electrical machinery, and partly from the awful wind. Mr. Fenwick came close to Tom, and exclaimed:

"Do you think it would be any use to try once more to go above or below the path of the storm?"

Tom's first impulse was to say that it would be useless, but he recollected that the craft belonged to Fenwick, and surely that gentleman had a right to make a suggestion. The young inventor nodded.

"We'll try to go up," he said. "If that doesn't work, I'll see if I can force her down. It will be hard work, though. The wind is too stiff."

Tom shifted the levers and rudders. His eyes were on the barograph—that delicate instrument, the trembling hand of which registered their height. Tom had tilted the deflection rudder to send them up, but as he watched the needle he saw it stationary. They were not ascending, though the great airship was straining to mount to an upper current where there might be calm.

It was useless, however, and Tom, seeing the futility of it, shifted the rudder to send them downward. This was more easily accomplished, but it was a change for the worse, since, the nearer to the ocean they went, the fiercer blew the wind.

"Back! Go back up higher!" cried Mr. Damon.

"We can't!" yelled Tom. "We've got to stay here now!"

"Oh, but this is awful!" exclaimed Mr. Fenwick. "We can never stand this!"

The airship swayed more than ever, and the

occupants were tossed about in the cabin, from side to side. Indeed, it did seem that human beings never could come alive out of that fearful ordeal.

As Tom looked from one of the windows of the cabin, he noted a pale, grayish sort of light outside. At first he could not understand what it was, then, as he observed the sickly gleams of the incandescent electric lamps, he knew that the hour of dawn was at hand.

"See!" he exclaimed to his companions, pointing to the window. "Morning is coming."

"Morning!" gasped Mr. Damon. "Is the night over? Now, perhaps we shall get rid of the storm."

"I'm afraid not," answered Tom, as he noted the anemometer and felt the shudderings of the *Whizzer* as she careened on through the gale. "It hasn't blown out yet!"

The pale light increased. The electrics seemed to dim and fade. Tom looked to the engines. Some of the apparatus was in need of oil, and he supplied it. When he came back to the main cabin, where stood Mr. Damon and Mr. Fenwick, it was much lighter outside.

"Less than a day since we left Philadelphia," murmured the owner of the *Whizzer,* as he glanced at a distance indicator, "yet we have come

nearly sixteen hundred miles. We certainly did travel at top speed. I wonder where we are?"

"Still over the ocean," replied Mr. Damon, as he looked down at the heaving billows rolling amid crests of foam far below them. "Though what part of it would be hard to say. We'll have to reckon out our position when it gets calmer."

Tom came from the engine room. His face wore a troubled look, and he said, addressing the older inventor:

"Mr. Fenwick, I wish you'd come and look at the gas generating apparatus. It doesn't seem to be working properly."

"Anything wrong?" asked Mr. Damon, suspiciously.

"I hope not," replied Tom, with all the confidence he could muster. "It may need adjusting. I am not so familiar with it as I am with the one on the *Red Cloud*. The gas seems to be escaping from the bag, and we may have to descend for some distance."

"But the aeroplanes will keep us up, said Mr. Damon.

"Yes—they will," and Tom hesitated. "That is, unless something happens to them. They are rather frail to stand alone the brunt of the gale, and I wish——"

Tom did not complete the sentence. Instead,

he paused suddenly and seemed to be intently listening.

From without there came a rending, tearing, crashing sound. The airship quivered from end to end, and seemed to make a sudden dive downward. Then it appeared to recover, and once more glided forward.

Tom, followed by Mr. Fenwick, made a rush for the compartment where the machine was installed. They had no sooner reached it than there sounded an explosion, and the airship recoiled as if it had hit a stone wall.

"Bless my shaving brush! What's that?" cried Mr. Damon. "Has anything happened?"

"I'm rather afraid there has," answered Tom, solemnly. "It sounded as though the gas bag went up. And I'm worried over the strength of the planes. We must make an investigation!"

"We're falling!" almost screamed Mr. Fenwick, as he glanced at the barograph, the delicate needle of which was swinging to and fro, registering different altitudes.

"Bless my feather bed! So we are!" shouted Mr. Damon. "Let's jump, and avoid being caught under the airship!"

He darted for a large window, opening from the main cabin, and was endeavoring to raise it when Tom caught his hand.

"What are you trying to do," asked the lad, hoarsely.

"Save my life! I want to get out of this as soon as I can. I'm going to jump!"

"Don't think of it! You'd be instantly killed. We're too high for a jump, even into the ocean."

"The ocean! Oh, is that still below us? Is there any chance of being saved? What can be done?" Mr. Damon hesitated.

"We must first find out how badly we are damaged," said Tom, quietly. "We must keep our heads, and be calm, no matter what happens. I need your help, Mr. Damon."

This served to recall the rather excited man to his senses. He came back to the centre of the cabin, which was no easy task, for the floor of it was tilted at first one angle, and then another. He stood at Tom's side.

"What can I do to help you?" he asked. Mr. Fenwick was darting here and there, examining the different machines. None of them seemed to be damaged.

"If you will look and see what has happened to our main wing planes, I will see how much gas we have left in the bag," suggested Tom. "Then we can decide what is best to be done. We are still quite high, and it will take some time to complete our fall, as, even if everything is gone, the

material of the bag will act as a sort of parachute."

Mr. Damon darted to a window in the rear of the cabin, where he could obtain a glimpse of the main wing planes. He gave a cry of terror and astonishment.

"Two of the planes are gone!" he reported. "They are torn and are hanging loose."

"I feared as much," retorted Tom, quietly. "The gale was too much for them."

"What of the lifting gas?" asked Mr. Fenwick, quickly.

"It has nearly all flowed out of the retaining bag."

"Then we must make more at once. I will start the generating machine."

He darted toward it.

"It will be useless," spoke Tom, quietly.

"Why?"

"Because there is no bag left to hold it. The silk and rubber envelope has been torn to pieces by the gale. The wind is even stronger than it was last night."

"Then what's to be done?" demanded Mr. Damon, with a return of his alarmed and nervous manner. "Bless my fingernails! What's to be done?"

For an instant Tom did not answer. It was

constantly getting lighter, though there was no sun, for it was obscured by scudding clouds. The young inventor looked critically at the various gages and indicators.

"Is—is there any chance for us?" asked Mr. Fenwick, quietly.

"I think so," answered Tom, with a hopeful smile. "We have about two thousand feet to descend, for we have fallen nearly that distance since the accident."

"Two thousand feet to fall!" gasped Mr. Damon. "We can never do it and live!"

"I think so," spoke Tom.

"Bless my gizzard! How?" fairly exploded Mr. Damon.

"By vol-planing down!"

"But, even if we do, we will fall into the ocean!" cried Mr. Fenwick. "We will be drowned!"

"No," and Tom spoke more quietly than before. "We are over a large island," he went on, "and I propose to let the disabled airship vol-plane down to it. That is our only chance."

"Over an island!" cried Mr. Damon. He looked down through the floor observation window. Tom had spoken truly. At that moment they were over a large island, which had suddenly loomed up in the wild and desolate waste of the

ocean. They had reached its vicinity just in time.

Tom stepped to the steering and rudder levers, and took charge. He was going to attempt a most difficult feat—that of guiding a disabled airship back to earth in the midst of a hurricane, and landing her on an unknown island. Could he do it?

There was but one answer. He must try. It was the only chance of saving their lives, and a slim one at best.

Down shot the damaged *Whizzer* like some giant bird with broken wings, but Tom Swift was in charge, and it seemed as if the craft knew it, as she began that earthward glide.

CHAPTER XIII

ON EARTHQUAKE ISLAND

MINGLED feelings possessed the three adventurers within the airship. Mr. Damon and Mr. Fenwick had crowded to the window, as Tom spoke, to get a glimpse of the unknown island toward which they were shooting. They could see it more plainly now, from the forward casement, as well as from the one in the bottom of the craft. A long, narrow, rugged piece of land it was, in the midst of the heaving ocean, for the storm still raged and lashed the waves to foam.

"Can you make it?" asked Mr. Damon, in a low voice.

"I think so," answered Tom, more cheerfully.

"Shall I shut down the motor?" inquired the older inventor.

"Yes, you might as well. We don't need the propellers now, and I may be better able to make the glide without them."

The buzzing and purring electrical apparatus

was shut down. Silence reigned in the airship, but the wind still howled outside. As Tom had hoped, the ship became a little more steady with the stopping of the big curved blades, though had the craft been undamaged they would have served to keep her on an even keel.

With skillful hand he so tilted the elevating planes that, after a swift downward glide, the head of the *Whizzer* would be thrown up, so to speak, and she would sail along in a plane parallel to the island. This had the effect of checking her momentum, just as the aviator checks the downward rush of his monoplane or biplane when he is making a landing.

Tom repeated this maneuver several times, until a glance at his barograph showed that they had but a scant sixty feet to go. There was time but for one more upward throwing of the *Whizzer's* nose, and Tom held to that position as long as possible. They could now make out the topography of the island plainly, for it was much lighter. Tom saw a stretch of sandy beach, and steered for that.

Downward shot the airship, inert and lifeless. It was not like guiding his little *Butterfly* to earth after a flight, but Tom hoped he could make it. They were now within ten feet of the earth, skimming forward. Tom tried another upward tilt,

but the forward planes would not respond. They could get no grip on the air.

With a crash that could have been heard some distance the *Whizzer* settled to the sand. It ran along a slight distance, and then, as the bicycle wheels collapsed under the pressure, the airship seemed to go together in a shapeless mass.

At the first impact with the earth, Tom had leaped away from the steering wheel and levers, for he did not want to be crushed against them. Mr. Damon and Mr. Fenwick, in pursuance of a plan adopted when they found that they were falling, had piled a lot of seat cushions around them. They had also provided some as buffers for Tom, and our hero, at the instant of the crash, had thrown himself behind and upon them.

It seemed as if the whole ship went to pieces. The top of the main cabin crashed down, as the side supports gave way, but, fortunately, there were strong main braces, and the roof did not fall completely upon our friends.

The whole bottom of the craft was forced upward, and, had it not been for the protecting cushions, there might have been serious injuries to all concerned. As it was they were badly bruised and shaken up.

After the first crash, and succeeding it an instant later, there came a second smash, followed

by a slight explosion, and a shower of sparks could be seen in the engine room.

"That's the electrical apparatus smashing through the floor!" called Tom. "Come, let's get out of here before the gasolene sets anything on fire. Are you all right, Mr. Damon, and you, Mr. Fenwick?"

"Yes, I guess so," answered the inventor. "Oh, what a terrible crash! My airship is ruined!"

"You may be glad we are alive," said Mr. Damon. "Bless my top knot, I feel——"

He did not finish the sentence. At that moment a piece of wood, broken from the ceiling, where it had hung by a strip of canvas came crashing down, and hit Mr. Damon on the head.

The eccentric man toppled over on his pile of cushions, from which he was arising when he was struck.

"Oh, is he killed?" gasped Mr. Fenwick.

"I hope not!" cried Tom. "We must get him out of here, at all events. There may be a fire."

They both sprang to Mr. Damon's aid, and succeeded in lifting him out. There was no difficulty in emerging from the airship as there were big, broken gaps, on all sides of what was left of the cabin. Once in the outer air Mr. Damon revived, and opened his eyes.

"Much hurt?" asked Tom, feeling of his friend's head.

"No—no, I—I guess not," was the slow answer. "I was stunned for a moment. I'm all right now. Nothing broken, I guess," and his hand went to his head.

"No, nothing broken," added Tom, cheerfully, "but you've got a lump there as big as an ostrich egg. Can you walk?"

"Oh, I'm all right. Bless my stars, what a wreck!"

Mr. Damon looked at the remains of the airship. It certainly was a wreck! The bent and twisted planes were wrapped about the afterpart, the gas bag was but a shred, the frame was splintered and twisted, and the under part, where the starting wheels were placed, resembled a lot of broken bicycles. The cabin looked like a shack that had sustained an explosion of dynamite.

"It's a wonder we came out alive," said Mr. Fenwick, in a low voice.

"Indeed it is," agreed Tom, as he came back with a tin can full of sea water, with which to bathe Mr. Damon's head. The lad had picked up the can from where it had rolled from the wreck, and they had landed right on the beach.

"It doesn't seem to blow so hard," observed

Mr. Damon, as he was tenderly sopping his head with a handkerchief wet in the salt water.

"No, the wind is dying out, but it happened too late to do us any good," remarked Tom, sorrowfully. "Though if it hadn't blown us this far, we might have come to grief over the ocean, and be floundering in that, instead of on dry land."

"That's so," agreed Mr. Fenwick, who was carefully feeling of some bruises on his legs. "I wonder where we are, anyhow?"

"I haven't the least idea," responded Tom. "It's an island, but which one, or where it is I don't know. We were blown nearly two thousand miles, I judge."

He walked over and surveyed the wreck. Now that the excitement was over he was beginning to be aware of numerous bruises and contusions. His legs felt rather queer, and on rolling up his trousers he found there was a deep cut in the right shin, just below his knee. It was bleeding, but he bandaged it with a spare handkerchief, and walked on.

Peering about, he saw that nearly the whole of the machinery in the engine room, including most of the electrical apparatus, had fallen bodily through the floor, and now rested on the sand.

"That looks to be in pretty good shape." mused

Tom, "but it's a question whether it will ever be any good to us. We can't rebuild the airship here, that's certain."

He walked about the wreck, and then returned to his friends. Mr. Damon was more like himself, and Mr. Fenwick had discovered that he had only minor bruises.

"Bless my coffee cup!" exclaimed Mr. Damon. "I declare, I feel hungry. I wonder if there's anything left to eat in the wreck?"

"Plenty," spoke Tom, cheerfully. "I'll get it out. I can eat a sandwich or too myself, and perhaps I can set up the gasolene stove, and cook something."

As the young inventor was returning to the wreck, he was halted halfway by a curious trembling feeling. At first he thought it was a weakness of his legs, caused by his cut, but a moment later he realized with a curious, sickening sensation that it was the ground—the island itself—that was shaking and trembling.

The lad turned back. Mr. Damon and Mr. Fenwick were staring after him with fear showing on their faces.

"What was that?" cried the inventor.

"Bless my gizzard! Did you feel that, Tom?" cried Mr. Damon. "The whole place is shaking!"

Indeed, there was a stronger tremor now, and

it was accompanied by a low, rumbling sound, like distant thunder. The adventurers were swaying to and fro.

Suddenly they were tossed to the ground by a swaying motion, and not far off a great crack opened in the earth. The roaring, rumbling sound increased in volume.

"An earthquake! It's an earthquake!" cried Tom. "We're in the midst of an earthquake!"

CHAPTER XIV

A NIGHT IN CAMP

THE rumbling and roaring continued for perhaps two minutes, during which time the castaways found it impossible to stand, for the island was shaking under their feet with a sickening motion. Off to one side there was a great fissure in the earth, and, frightened as he was, Tom looked to see if it was extending in their direction.

If it was, or if a crack opened near them, they might be precipitated into some bottomless abyss, or into the depths of the sea. But the fissure did not increase in length or breadth, and, presently the rumbling, roaring sound subsided. The island grew quiet and the airship travelers rose to their feet.

"Bless my very existence! What happened?" cried Mr. Damon.

"It was an earthquake; wasn't it, Tom?" asked Mr. Fenwick.

"It sure was," agreed the young inventor.

"Rather a hard one, too. I hope we don't have any more."

"Do you think there is any likelihood of it?" demanded Mr. Damon. "Bless my pocketbook! If I thought so I'd leave at once."

"Where would you go?" inquired Tom, looking out across the tumbling ocean, which had hardly had a chance to subside from the gale, ere it was again set in a turmoil by the earth-tremor.

"That's so—there isn't a place to escape to," went on the eccentric man, with something like a groan. "We are in a bad place—do you think there'll be more quakes, Tom?"

"It's hard to say. I don't know where we are, and this island may be something like Japan, subject to quakes, or it may be that this one is merely a spasmodic tremor. Perhaps the great storm which brought us here was part of the disturbance of nature which ended up with the earthquake. We may have no more."

"And there may be one at any time," added Mr. Fenwick.

"Yes," assented Tom.

"Then let's get ready for it," proposed Mr. Damon. "Let's take all the precautions possible."

"There aren't any to take," declared Tom. "All we can do is to wait until the shocks come—

if any more do come, which I hope won't happen, and then we must do the best we can."

"Oh, dear me! Bless my fingernails!" cried Mr. Damon, wringing his hands. "This is worse than falling in an airship! There you do have *some* chance. Here you haven't any."

"Oh, it may not be so bad," Tom cried to reassure him. "This may have been the first shock in a hundred years, and there may never be another."

But, as he looked around on the island, he noted evidences that it was of volcanic origin, and his heart misgave him, for he knew that such islands, created suddenly by a submarine upheaval, might just as suddenly be destroyed by an earthquake, or by sinking into the ocean. It was not a pleasant thought—it was like living over a mine, that might explode at any moment. But there was no help for it.

Tom tried to assume a cheerfulness he did not feel. He realized that, in spite of his youth, both Mr. Damon and Mr. Fenwick rather depended on him, for Tom was a lad of no ordinary attainments, and had a fund of scientific knowledge. He resolved to do his best to avoid making his two companions worry.

"Let's get it off our minds," suggested the lad, after a while. "We were going to get something

to eat. Suppose we carry out that program. My appetite wasn't spoiled by the shock."

"I declare mine wasn't either," said Mr. Damon, "but I can't forget it easily. It's the first earthquake I was ever in."

He watched Tom as the latter advanced once more toward the wreck of the airship, and noticed that the lad limped, for his right leg had been cut when the *Whizzer* had fallen to to earth.

"What's the matter, Tom; were you hurt in the quake?" asked the eccentric man.

"No—no," Tom hastened to assure him. "I just got a bump in the fall—that's all. It isn't anything. If you and Mr. Fenwick want to get out some food from the wrecked store room I'll see if I can haul out the gasolene stove from the airship. Perhaps we can use it to make some coffee."

By delving in about the wreck, Tom was able to get out the gasolene stove. It was broken, but two of the five burners were in commission, and could be used. Water, and gasolene for use in the airship, was carried in steel tanks. Some of these had been split open by the crash, but there was one cask of water left, and three of gasolene, insuring plenty of the liquid fuel. As for the water, Tom hoped to be able to find a spring on the island.

In the meanwhile, Mr. Damon and Mr. Fenwick had been investigating the contents of the storeroom. There was a large supply of food, much larger than would have been needed, even on a two weeks' trip in the air, and the inventor of the *Whizzer* hardly knew why he had put so much aboard.

"But if we have to stay here long, it may come in handy," observed Tom, with a grim smile.

"Why; do you think we *will* be here long?" asked Mr. Damon.

The young inventor shrugged his shoulders.

"There is no telling,' 'he said. "If a passing steamer happens to see us, we may be taken off to-day or to-morrow. If not we may be here a week, or——" Tom did not finish. He stood in a listening attitude.

There was a rumbling sound, and the earth seemed again to tremble. Then there came a great splash in the water at the foot of a tall, rugged cliff about a quarter of a mile away. A great piece of the precipice had fallen into the ocean.

"I thought that was another earthquake coming," said Mr. Damon, with an air of relief.

"So did I," admitted Mr. Fenwick.

"It was probably loosened by the shock, and so fell into the sea," spoke Tom.

Their momentary fright over, the castaways proceeded to get their breakfast. Tom soon had water boiling on the gasolene stove, for he had rescued a tea-kettle and a coffee pot from the wreck of the kitchen of the airship. Shortly afterward, the aroma of coffee filled the air, and a little later there was mingled with it the appetizing odor of sizzling bacon and eggs, for Mr. Fenwick, who was very fond of the latter, had brought along a supply, carefully packed in sawdust carriers, so that the shock had broken only a few of them.

"Well, I call this a fine breakfast," exclaimed Mr. Damon, munching his bacon and eggs, and dipping into his coffee the hard pilot biscuit, which they had instead of bread. "We're mighty lucky to be eating at all, I suppose."

"Indeed we are," chimed in Mr. Fenwick.

"I'm awfully sorry the airship is wrecked, though," spoke Tom. "I suppose it's my fault. I should have turned back before we got over the ocean, and while the storm was not at its height. I saw that the wind was freshening, but I never supposed it would grow to a gale so suddenly. The poor old *Whizzer*—there's not much left of her!"

"Now don't distress yourself in the least," insisted Mr. Fenwick. "I'm proud to have built

a ship that could navigate at all. I see where I made lots of mistakes, and as soon as I get back to Philadelphia, I'm going to build a better one, if you'll help me, Tom Swift."

"I certainly will," promised the young inventor.

"And I'll take a voyage with you!' cried Mr. Damon. "Bless my teaspoon, Tom, but will you kindly pass the bacon and eggs again!"

There was a jolly laugh at the eccentric man, in which he himself joined, and the little party felt better. They were seated on bits of broken boxes taken from the wreck, forming a little circle about the gasolene stove, which Tom had set up on the beach. The wind had almost entirely died away, though the sea was still heaving in great billows, and masses of surf.

They had no exact idea of the time, for all their watches had stopped when the shock of the wreck came, but presently the sun peeped out from the clouds, and, from knowing the time when they had begun to fall, they judged it was about ten o'clock, and accordingly set their timepieces.

"Well," observed Tom, as he collected the dishes, which they had also secured from the wreck, "we must begin to think about a place to spend the night. I think we can rig up a shelter from some of the canvas of the wing-planes, and from what is left of the cabin. It

doesn't need to be very heavy, for from the warmth of the atmosphere, I should say we were pretty well south."

It was quite warm, now that the storm was over, and, as they looked at the vegetation of the island, they saw that it was almost wholly tropical.

"I shouldn't be surprised if we were on one of the smaller of the West Indian islands," said Tom. "We certainly came far enough, flying a hundred miles or more an hour, to have reached them. But this one doesn't appear to be inhabited."

"We haven't been all over it yet," said Mr. Damon. "We may find cannibals on the other side."

"Cannibals don't live in this part of the world," Tom assured him. "No, I think this island is practically unknown. The storm brought us here, and it might have landed us in a worse place."

As he spoke he thought of the yacht *Resolute,* and he wondered how her passengers, including the parents of Mary Nestor, had fared during the terrible blow.

"I hope they weren't wrecked, as we were," mused Tom.

But there was little time for idle thoughts. If they were going to build a shelter, they knew

that they must speedily get at it. Accordingly, with a feeling of thankfulness that their lives had been spared, they set to work taking apart such of the wreck as could the more easily be got at.

Boards, sticks, and planks were scattered about, and, with the pieces of canvas from the wing-planes, and some spare material which was carried on board, they soon had a fairly good shack, which would be protection enough in that warm climate.

Next they got out the food and supplies, their spare clothing and other belongings, few of which had been harmed in the fall from the clouds. These things were piled under another rude shelter which they constructed.

By this time it was three o'clock, and they ate again. Then they prepared to spend the night in their hastily made camp. They collected drift-wood, with which to make a fire, and, after supper, which was prepared on the gasolene stove, they sat about the cheerful blaze, discussing their adventures.

"To-morrow we will explore the island," said Tom, as he rolled himself up in his blankets and turned over to sleep. The others followed his example, for it was decided that no watch need

be kept. Thus passed several hours in comparative quiet.

It must have been about midnight that Tom was suddenly awakened by a feeling as if some one was shaking him. He sat up quickly and called out:

"What's the matter?"

"Eh? What's that? Bless my soul! What's going on?" shouted Mr. Damon.

"Did you shake me?" inquired Tom.

"I? No. What——?"

Then they realized that another earth-tremor was making the whole island tremble.

Tom leaped from his blankets, followed by Mr. Damon and Mr. Fenwick, and rushed outside the shack. They felt the earth shaking, but it was over in a few seconds. The shock was a slight one, nothing like as severe as the one in the morning. But it set their nerves on edge.

"Another earthquake!" groaned Mr. Damon. "How often are we to have them?"

"I don't know," answered Tom, soberly.

They passed the remainder of the night sleeping in blankets on the warm sands, near the fire, for they feared lest a shock might bring the shack down about their heads. However, the night passed with no more terrors.

CHAPTER XV

THE OTHER CASTAWAYS

"WELL, we're all alive, at any rate," announced Tom, when the bright sun, shining into his eyes, had awakened him. He sat up, tossed aside his blankets, and stood up. The day was a fine one, and the violence of the sea had greatly subsided during the night, their shack had suffered not at all from the slight shock in the darkness.

"Now for a dip in old Briney," the lad added, as he walked down to the surf. "I think it will make me feel better."

"I'm with you," added Mr. Fenwick, and Mr. Damon also joined the bathers. They came up from the waves, tingling with health, and their bruises and bumps, including Tom's cut leg, felt much better.

"You did get quite a gash; didn't you," observed Mr. Fenwick, as he noticed Tom's leg. "Better put something on it. I have antiseptic dressings and bandages in the airship, if we can find them."

"I'll look for them, after breakfast," Tom promised, and following a fairly substantial meal, considering the exigencies under which it was prepared, he got out the medicine chest, of which part remained in the wreck of the *Whizzer,* and dressed his wound. He felt much better after that.

"Well, what's our program for to-day?" Mr. Damon wanted to know, as they sat about, after they had washed up what few dishes they used.

"Let's make a better house to stay in," proposed Mr. Fenwick. "We may have to remain here for some time, and I'd like a more substantial residence."

"I think the one we now have will do," suggested Tom. "I was going to propose making it even less substantial."

"Why so?"

"Because, in the event of an earthquake, while we are sleeping in it, we will not be injured. Made of light pieces of wood and canvas it can't harm us very much if it falls on us."

"That's right," agreed Mr. Damon. "In earthquake countries all the houses are low, and built of light materials."

"Ha! So I recollect now," spoke Mr. Fenwick. "I used to read that in my geography, but

I never thought it would apply to me. But do you think we will be subject to the quakes?"

"I'm afraid so," was Tom's reply. "We've had two, now, within a short time, and there is no way of telling when the next will come. We will hope there won't be any more, but——"

He did not finish his sentence, but the others knew what he meant. Thereupon they fell to work, and soon had made a shelter that, while very light and frail, would afford them all the protection needed in that mild climate, and, at the same time, there would be no danger should an earthquake collapse it, and bring it down about their heads while they were sleeping in it.

For they decided that they needed some shelter from the night dews, as it was exceedingly uncomfortable to rest on the sands even wrapped in blankets, and with a driftwood fire burning nearby.

It was noon when they had their shack rebuilt to their liking, and they stopped for dinner. There was quite a variety of stores in the airship, enough for a much larger party than that of our three friends, and they varied their meals as much as possible. Of course all the stuff they had was canned, though there were some salted and smoked meats. But canned food can be had

in a variety of forms now-a-days, so the castaways did not lack much.

"What do you say to an exploring expedition this afternoon?" asked Tom, as they sat about after dinner. "We ought to find out what kind of an island we're on."

"I agree with you," came from Mr. Fenwick. "Perhaps on the other side we will stand a much better chance of speaking some passing vessel. I have been watching the horizon for some time, now, but I haven't seen the sign of a ship."

"All right, then we'll explore, and see what sort of an island we have taken possession of," went on Tom.

"And see if it isn't already in possession of natives—or cannibals," suggested Mr. Damon. "Bless my frying pan! but I should hate to be captured by cannibals at my time of life."

"Don't worry; there are none here," Tom assured him again.

They set out on their journey around the island. They agreed that it would be best to follow the beach around, as it was easier walking that way, since the interior of the place consisted of rugged rocks in a sort of miniature mountain chain.

"We will make a circuit of the place," proposed Tom, "and then, if we can discover nothing, we'll

go inland. The centre of the island is quite high, and we ought to be able to see in any direction for a great distance from the topmost peak. We may be able to signal a vessel."

"I hope so!" cried Mr. Damon. "I want to send word home that I am all right. My wife will worry when she learns that the airship, in which I set out, has disappeared."

"I fancy we all would like to send word home," added Mr. Fenwick. "My wife never wanted me to build this airship, and, now that I have sailed in it, and have been wrecked, I know she'll say 'I told you so,' as soon as I get back to Philadelphia."

Tom said nothing, but he thought to himself that it might be some time before Mrs. Fenwick would have a chance to utter those significant words to her husband.

Following the beach line, they walked for several miles. The island was larger than they had supposed, and it soon became evident that it would take at least a day to get all around it.

"In which case we will need some lunch with us," said Tom. "I think the best thing we can do now is to return to camp, and get ready for a longer expedition to-morrow."

Mr. Fenwick was of the same mind, but Mr. Damon called out:

"Let's go just beyond that cliff, and see what sort of a view is to be had from there. Then we'll turn back."

To oblige him they followed. They had not gone more than a hundred yards toward the cliff, than there came the preliminary rumbling and roaring that they had come to associate with an earthquake. At the same time, the ground began to shiver and shake.

"Here comes another one!" cried Tom, reeling about. He saw Mr. Damon and Mr. Fenwick topple to the beach. The roaring increased, and the rumbling was like thunder, close at hand. The island seemed to rock to its very centre.

Suddenly the whole cliff toward which they had been walking, appeared to shake itself loose. In another instant it was flung outward and into the sea, a great mass of rock and stone.

The island ceased trembling, and the roaring stopped. Tom rose to his feet, followed by his companions. He looked toward the place where the cliff had been. Its removal by the earthquake gave them a view of a part of the beach that had hitherto been hidden from them.

And what Tom saw caused him to cry out in astonishment. For he beheld, gathered around a little fire on the sand, a party of men and women. Some were standing, clinging to one

another in terror. Some were prostrate on the ground. Others were running to and fro in bewilderment.

"More castaways!" cried Tom. "More castaways," and, he added under his breath, "more unfortunates on earthquake island!"

CHAPTER XVI

AN ALARMING THEORY

FOR a few seconds, following Tom's announcement to his two companions, neither Mr. Damon nor Mr. Fenwick spoke. They had arisen from the beach, where the shock of the earthquake had thrown them, and were now staring toward the other band of castaways, who, in turn were gazing toward our three friends. There was a violent agitation in the sea, caused by the fall of the great cliff, and immense waves rushed up on shore, but all the islanders were beyond the reach of the rollers.

"Is it—do I really—am I dreaming or not?" at length gasped Mr. Damon.

"Is this a mirage, or do we really see people, Tom?" inquired Mr. Fenwick.

"They are real enough people," replied the lad, himself, somewhat dazed by the unexpected appearance of the other castaways.

"But how—why—how did they get here?" went on the inventor of the *Whizzer*.

"As long as they're not cannibals, we're all right," murmured Mr. Damon. "They seem to be persons like ourselves, Tom."

"They are," agreed the lad, "and they appear to be in the same sort of trouble as ourselves. Let's go forward, and meet them."

The tremor of the earthquake had now subsided, and the little band that was gathered about a big fire of driftwood was calmer. Those who had fallen, or who had thrown themselves on the sand, arose, and began feeling of their arms and legs to see if they had sustained any injuries. Others advanced toward our friends.

"Nine of them," murmured Tom, as he counted the little band of castaways, "and they don't seem to have been able to save much from the wreck of their craft, whatever it was." The beach all about them was bare, save for a boat drawn up out of reach of high water.

"Do you suppose they are a party from some disabled airship, Tom," asked Mr. Fenwick.

"Not from an airship," answered the lad. "Probably from some vessel that was wrecked in the gale. But we will soon find out who they are."

Tom led the way for his two friends. The fall of the cliff had made a rugged path around the base of it, over rocks, to where the other

people stood. Tom scrambled in and out among the boulders, in spite of the pain it caused his wounded leg. He was anxious to know who the other castaways were, and how they had come there.

Several of the larger party were now advancing to meet the lad and his friends. Tom could see two women and seven men.

A moment later, when the lad had a good view of one of the ladies and a gentleman, he could not repress a cry of astonishment. Then he rubbed his eyes to make sure it was not some blur or defect of vision. No, his first impression had been correct.

"Mr. Nestor!" cried Tom, recognizing the father of his girl friend. "And Mrs. Nestor!" he added a moment later.

"Why—of all things—look—Amos—it's—it can't be possible—and yet—why, it's Tom Swift!" cried the lady.

"Tom—Tom Swift—here?" ejaculated the man at her side.

"Yes—Tom Swift—the young inventor—of Shopton—don't you know—the lad who saved Mary's life in the runaway—Tom Swift!"

"Tom Swift!" murmured Mr. Nestor. "Is it possible!"

"I'm Tom Swift, all right," answered the

owner of that name, " but how in the world did you get on this island, Mr. Nestor?"

"I might ask you the same thing, Tom. The yacht *Resolute,* on which we were making a voyage to the West Indies, as guests of Mr. George Hosbrook, was wrecked in the awful gale. We took to the boats and managed to reach this island. The yacht sunk, and we only had a little food. We are almost starved! But how came you here?"

"Mr. Fenwick's airship was wrecked, and we dropped down here. What a coincidence! To think that I should meet you here! But if you're hungry, it's the best thing in the world that we met you, for, though our airship was wrecked, we have a large supply of food. Come over to our camp, and we'll give you all you want!"

Tom had rushed forward, and was shaking hands with Mary's parents, so unexpectedly met with, when Mr. Nestor called out:

"Come over here, Mr. Hosbrook. I want you to meet a friend of mine."

A moment later, the millionaire owner of the ill-fated *Resolute* was shaking hands with Tom.

"I can't understand it," Mr. Hosbrook said. "To think of meeting other people on this desolate island—this island of earthquakes."

"Oh, please don't speak of earthquakes!" cried

Mrs. Nestor. "We are in mortal terror! There have been several since we landed in the most terrible storm day before yesterday. Isn't it awful! It is a regular earthquake island!"

"That's what I call it," spoke Tom, grimly.

The others of the larger party of refugees now came up. Besides Mr. and Mrs. Nestor, and Mr. Hosbrook, there was Mr. and Mrs. Floyd Anderson, friends of the millionaire; Mr. Ralph Parker, who was spoken of as a scientist, Mr. Barcoe Jenks, who seemed an odd sort of individual, always looking about suspiciously, Captain Mentor, who had been in command of the yacht, and Jake Fordam, the mate of the vessel.

"And are these all who were saved?" asked Tom, as he introduced his two friends, and told briefly of their air voyage.

"No," answered Mr. Hosbrook, "two other boatloads, one containing most of the crew, and the other containing some of my guests, got away before our boat left. I trust they have been rescued, but we have heard nothing about them. However, our own lives may not long be safe, if these earthquakes continue."

"But did I understand you to say, Mr. Swift, that you had food?" he went on. "If you have, I will gladly pay you any price for some, especially for these two ladies, who must be faint. I

have lost all my ready cash, but if we ever reach civilization, I will——"

"Don't speak of such a thing as pay," interrupted Mr. Fenwick. "All that we have we'll gladly share with you. Come over to our camp. We have enough for all, and we can cook on our gasolene stove. Don't speak of pay, I beg of you."

"Ah—er, if Mr. Hosbrook has no money, perhaps I can offer an equivalent," broke in the man who had been introduced as Barcoe Jenks. "I have—er—some securities——" He stopped and looked about indefinitely, as though he did not know exactly what to say, and he was fumbling at a belt about his waist; a belt that might contain treasure.

"Don't speak of reimbursing us," went on Mr. Fenwick, with rather a suspicious glance at Mr. Jenks. "You are welcome to whatever we have."

"Bless my topknot; certainly, yes!" joined in Mr. Damon, eagerly.

"Well, I—er—I only spoke of it," said Mr. Jenks, hesitatingly, and then he turned away. Mr. Hosbrook looked sharply at him, but said nothing.

"Suppose we go to our camp," proposed Tom. "We may be able to get you up a good meal, before another earthquake comes."

"I wonder what makes so many of them?" asked Mrs. Nestor, with a nervous shiver.

"Yes, indeed, they are terrifying! One never knows when to expect them," added Mrs. Anderson.

"I have a theory about them," said Mr. Parker, the scientist, who, up to this time had spoken but little.

"A theory?" inquired Tom.

"Yes. This island is one of the smaller of the West Indies group. It is little known, and has seldom been visited, I believe. But I am sure that what causes the earthquakes is that the whole island has been undermined by the sea, and it is the wash of great submarine waves and currents which cause the tremors."

"Undermined by the sea?" repeated Tom.

"Yes. It is being slowly washed away."

"Bless my soul! Washed away!" gasped Mr. Damon.

"And, in the course of a comparatively short time, it will sink," went on the scientist, as cheerfully as though he was a professor propounding some problem to his class.

"Sink!" ejaculated Mrs. Nestor. "The whole island undermined! Oh, what an alarming theory!"

"I wish I could hold to a different one,

madam," was Mr. Parker's answer, "but I cannot. I think the island will sink after a few more shocks."

"Then what good will my——" began Barcoe Jenks, but he stopped in confusion, and again his hand went to his belt with a queer gesture.

CHAPTER XVII

A MIGHTY SHOCK

TOM SWIFT turned to gaze at Mr. Barcoe Jenks. That individual certainly had a strange manner. Perhaps it might be caused by the terror of the earthquakes, but the man seemed to be trying to hold back some secret. He was constrained and ill at ease. He saw the young inventor looking at him, and his hands, which had gone to his belt, with a spasmodic motion, dropped to his side.

"You don't really mean to say, Parker, that you think the whole island is undermined, do you?" asked the owner of the *Resolute.*

"That's my theory. It may be a wrong one, but it is borne out by the facts already presented to us. I greatly fear for our lives!"

"But what can we do?" cried Mrs. Nestor.

"Nothing," answered the scientist, with a shrug of his shoulders. "Absolutely nothing, save to wait for it to happen."

"Don't say that!" begged Mrs. Anderson. "Can't you gentlemen do something—build a boat and take us away. Why, the boat we came here in——"

"Struck a rock, and stove a hole in the bottom as big as a barrel, madam," interrupted Captain Mentor. "It would never do to put to sea in that."

"But can't something else be done?" demanded Mrs. Nestor. "Oh, it is awful to think of perishing on this terrible earthquake island. Oh, Amos! Think of it, and Mary home alone! Have you seen her lately, Mr. Swift?"

Tom told of his visit to the Nestors' home. Our hero was almost in despair, not so much for himself, as for the unfortunate women of the party—and one of them was Mary's mother! Yet what could he do? What chance was there of escaping from the earthquake?

"Bless my gizzard!" exclaimed Mr. Damon. "Don't let's stand here worrying! If you folks are hungry come up to our camp. We have plenty. Afterward we can discuss means of saving ourselves."

"I want to be saved!" exclaimed Mr. Jenks. "I must be saved! I have a great secret—a secret——"

Once more he paused in confusion, and once more his hands nervously sought his belt.

"I would give a big reward to be saved," he murmured.

"And so, I fancy, we all would," added Captain Mentor. "But we are not likely to. This island is out of the track of the regular line of vessels."

"Where are we, anyhow?" inquired Mr. Fenwick. "What island is this?"

"It isn't down on the charts, I believe," was the captain's reply, "but we won't be far out, if we call it Earthquake Island. That name seems to fit it exactly."

They had walked on, while talking, and now had gone past the broken cliff. Tom and his two friends of the airship led the way to the camp they had made. On the way, Mr. Hosbrook related how his yacht had struggled in vain against the tempest, how she had sprung a leak, how the fires had gone out, and how, helpless in the trough of the sea, the gallant vessel began to founder. Then they had taken to the boats, and had, most unexpectedly come upon the island.

"And since we landed we have had very little to eat," said Mrs. Nestor. "We haven't had a place to sleep, and it has been terrible. Then, too, the earthquakes! And my husband and I

worried so about Mary. Oh, Mr. Swift! Do you think there is any chance of us ever seeing her again?"

"I don't know," answered Tom, softly. "I'll do all I can to get us off this island. Perhaps we can build a raft, and set out. If we stay here there is no telling what will happen, if that scientist's theory is correct. But there is our camp, just ahead. You will be more comfortable, at least for a little while."

In a short time they were at the place where Tom and the others had built the shack. The ruins of the airship were examined with interest, and the two women took advantage of the seclusion of the little hut, to get some much needed rest until a meal should be ready.

One was soon in course of preparation by Tom and Mr. Damon, aided by Mate Fordam, of the *Resolute*. Fortunate it was that Mr. Fenwick had brought along such a supply of food, for there were now many mouths to feed.

That the supper (which the meal really was, for it was getting late) was much enjoyed, goes without saying. The yacht castaways had subsisted on what little food had been hurriedly put into the life boat, as they left the vessel.

At Tom's request, while it was yet light, Captain Mentor and some of the men hunted for a

spring of fresh water, and found one, for, with the increase in the party, the young inventor saw the necessity for more water. The spring gave promise of supplying a sufficient quantity.

There was plenty of material at hand for making other shacks, and they were soon in course of construction. They were made light, as was the one Tom and his friends first built, so that, in case of another shock, no one would be hurt seriously. The two ladies were given the larger shack, and the men divided themselves between two others that were hastily erected on the beach. The remainder of the food and stores was taken from the wreck of the airship, and when darkness began to fall, the camp was snug and comfortable, a big fire of driftwood burning brightly.

"Oh, if only we can sleep without being awakened by an earthquake!" exclaimed Mrs. Nestor, as she prepared to go into the shack with Mrs. Anderson. "But I am almost afraid to close my eyes!"

"If it would do any good to stay up and watch, to tell you when one was coming, I'd do so," spoke Tom, with a laugh, "but they come without warning."

However, the night did pass peacefully, and there was not the least tremor of the island. In the morning the castaways took courage and,

after breakfast, began discussing their situation more calmly.

"It seems to me that the only solution is to build some sort of a raft, or other craft and leave the island," said Mr. Fenwick.

"Bless my hair brush!" cried Mr. Damon. "Why can't we hoist a signal of distress, and wait for some steamer to see it and call for us? It seems to me that would be more simple than going to sea on a raft. I don't like the idea."

"A signal would be all right, if this island was in the path of the steamers," said Captain Mentor. "But it isn't. Our flag might fly for a year, and never be seen."

His words seemed to strike coldness to every heart. Tom, who was looking at the wreck of the airship, suddenly uttered an exclamation. He sprang to his feet.

"What is it?" demanded Mr. Fenwick. "Does your sore leg hurt you?"

"No, but I have just thought of a plan!" fairly shouted the young inventor. "I have it! Wait and see if I can work it!"

"Work what?" cried Mr. Damon.

Tom did not get a chance to answer, for, at that moment, there sounded, at the far end of the island, whence the yacht castaways had come, a terrific crash. It was accompanied, rather than

followed, by a shaking, trembling and swaying of the ground.

"Another earthquake!" screamed Mrs. Nestor, rushing toward her husband. The castaways gazed at each other affrighted.

Suddenly, before their eyes, they saw the extreme end of that part of the island on which they were camping, slip off, and disappear beneath the foaming waves of the sea, while the echoes of the mighty crash came to their ears!

CHAPTER XVIII

MR. JENKS HAS DIAMONDS

STUNNED, and well-nigh paralyzed by the suddenness of the awful crash, and the recurrence of the earthquake, the castaways gazed spell-bound at one another.

Succeeding the disappearance of the end of the island there arose a great wave in the ocean, caused by the immersion of such a quantity of rock and dirt.

"Look out!" yelled Tom, "there may be a flood here!"

They realized his meaning, and hastened up the beach, out of reach of the water if it should come. And it did. At first the ocean retreated, as though the tide was going out, then, with a rush and roar, the waves came leaping back, and, had the castaways remained where they had been standing they would have been swept out to sea.

As it was the flood reached part of the wreck of the airship, that lay on the beach, and washed

away some of the broken planks. But, after the first rush of water, the sea grew less troubled, and there was no more danger from that source.

True, the whole island was rumbling and trembling in the throes of an earthquake, but, by this time, the refugees had become somewhat used to this, and only the two ladies exhibited any outward signs of great alarm, though Mr. Barcoe Jenks, Tom observed, was nervously fingering the belt which he wore about his waist.

"I guess the worst is over," spoke Mr. Fenwick, as they stood looking toward where part of the island had vanished. "The shock expended itself on tearing that mass of rock and earth away."

"Let us hope so," added Mr. Hosbrook, solemnly. "Oh, if we could only get away from this terrible place! We must hoist a signal of distress, even if we are out of the track of regular vessels. Some ship, blown out of her course may see it. Captain Mentor, I wish you and Mr. Fordam would attend to that."

"I will, sir," answered the commander of the ill-fated *Resolute.* "The signal shall be hoisted at once. Come on, Mr. Fordam," he added, turning to the first mate.

"If you don't mind," interrupted Tom, "I wish you would first help me to get what remains of

the airship up out of reach of any more possible high waves. That one nearly covered it, and if there are other big rollers, the wreck may be washed out to sea."

"I can't see that any great harm would result from that," put in Mr. Jenks. "There isn't anything about the wreck that we could use to make a boat or raft from." Indeed, there was little left of the airship, save the mass of machinery.

"Well, it may come in handy before we leave here," said Tom, and there was a quiet determined air about him, that caused Mr. Damon to look at him curiously. The odd gentleman started to utter one of his numerous blessings, and to ask Tom a question, but he thought better of it. By this time the earthquake had ceased, and the castaways were calmer.

Tom started toward the airship wreck, and began pulling off some broken boards to get at the electrical machinery.

"I guess you had better give Mr. Swift a hand, Captain Mentor," spoke the millionaire yacht owner. "I don't know what good the wreck can be, but we owe considerable to Mr. Swift and his friends, and the least we can do is to aid them in anything they ask. So, Captain, if you don't mind, you and the mate bear a hand. In fact,

we'll all help, and move the wreck so far up that there will be no danger, even from tidal waves."

Tom looked pleased at this order, and soon he and all the men in the little party were busy taking out the electrical apparatus, and moving it farther inland.

"What are you going to do with it, Tom?" asked Mr. Damon, in a low voice, as he assisted the young inventor to carry a small dynamo, that was used for operating the incandescent lights.

"I hardly know myself. I have a half-formed plan in my mind. I may be able to carry it out, and I may not. I don't want to say anything until I look over the machinery, and see if all the parts which I need are here. Please say nothing about it."

"Bless my toothpick! Of course, I'll not," promised Mr. Damon.

When the removal of most of the machinery of the wrecked airship had been completed, Mrs. Nestor exclaimed:

"Well, since you are moving that out of harm's way, don't you think it would be a good idea to change our camp, also? I'm sure I'll never sleep a wink, thinking that part of the island may fall into the ocean at any moment in the night,

and create a wave that may wash us all out to sea. Can't we move the camp, Mr. Swift?"

"No reason why we can't," answered the lad, smiling. "I think it would be a good plan to take it farther back. We are likely to be here some time, and, while we are about it, we might build more complete shelters, and have a few more comforts."

The others agreed with this idea, so the little shacks that had been erected were taken down, and moved to higher ground, where a better outlook could be had of the surrounding ocean. At the same time as safe a place as possible, considering the frequent earthquakes, was picked out—a place where there were no overhanging rocks or cliffs.

Three huts were built, one for the two ladies, one for the men, and third where the cooking could be done. This last also held the food supplies and stores, and Tom noted, with satisfaction, that there was still sufficient to eat to last over a week. Mr. Fenwick had not stinted his kitchen stores.

This work done, Captain Mentor and Mate Fordam went to the highest part of the island, where they erected a signal, made from pieces of canvas that had been in the life boat. The boat itself was brought around to the new camp, and

at first it was hoped that it could be repaired, and used. But too large a hole had been stove in the bottom, so it was broken up, and the planks used in making the shacks.

This work occupied the better part of two days, and during this time, there were no more earthquakes. The castaways began to hope that the island would not be quiet for a while. Mrs. Anderson and Mrs. Nestor assumed charge of the "housekeeping" arrangements, and also the cooking, which relieved Tom from those duties. The two ladies even instituted " wash-day," and when a number of garments were hung on lines to dry, the camp looked like some summer colony of pleasure-seekers, out for a holiday.

In the meanwhile, Tom had spent most of his time among the machinery which had been taken from the airship. He inspected it carefully, tested some of the apparatus, and made some calculations on a bit of paper. He seemed greatly pleased over something, and one afternoon, when he was removing some of the guy and stay wires from the collapsed frame of the *Whizzer,* he was approached by Mr. Barcoe Jenks.

"Planning something new?" asked Mr. Jenks, with an attempt at jollity, which, however, failed. The man had a curious air about him, as if he

was carrying some secret that was too much for him.

"Well, nothing exactly new," answered Tom. "At best I am merely going to try an experiment."

"An experiment, eh?" resumed Mr. Jenks. "And might I ask if it has anything to do with rescuing us from this island?"

"I hope it will have," answered Tom, gravely.

"Good!" exclaimed Mr. Jenks. "Well, now I have a proposition to make to you. I suppose you are not very wealthy, Mr. Swift?" He gazed at Tom, quizzically.

"I am not poor," was the young inventor's proud answer, "but I would be glad to make more money—legitimately."

"I thought so. Most every one would. Look here!"

He approached closer to Tom, and, pulling his hand from his pocket, held it extended. In the palm were a number of irregularly-shaped objects—stones or crystals the lad took them to be, yet they did not look like ordinary stones or crystals.

"Do you know what those are?" asked Mr. Jenks.

"I might guess," replied Tom.

"I'll save you the trouble. They are diamonds!

Diamonds of the very first water, but uncut. Now to the point. I have half a million dollars worth of them. If you get me safely off this island, I will agree to make you a quarter of a million dollars worth of diamonds!"

"Make me a quarter of a million dollars worth of diamonds?" asked Tom, struck by the use of the work "make."

"Yes, 'make,'" answered Mr. Jenks. "That is if I can discover the secret—the secret of Phantom Mountain. Get me away from the island and I will share my knowledge with you —I need help—help to learn the secret and help to make the diamonds—see, there are some of the first ones made, but I have been defrauded of my rights—I need the aid of a young fellow like you. Will you help? See, I'll give you some diamonds now. They are genuine, though they are not like ordinary diamonds. I made them. Will you——"

Before Tom could answer, there came a warning rumble of the earth, and a great fissure opened, almost at the feet of Mr. Jenks, who, with a cry of fear, leaped toward the young inventor.

CHAPTER XIX

SECRET OPERATIONS

HELP me save this machinery!" yelled Tom, whose first thought was for the electrical apparatus. "Don't let it fall into that chasm!"

For the crack had widened, until it was almost to the place where the parts of the wrecked airship had been carried.

"The machinery? What do I care about the machinery?" cried Mr. Jenks. "I want to save my life!"

"And this machinery is our only hope!" retorted Tom. He began tugging at the heavy dynamos and gasolene engine, but he might have saved himself the trouble, for with the same suddenness with which it opened, the crack closed again. The shock had done it, and, as if satisfied with that phenomena, the earthquake ceased, and the island no longer trembled.

"That was a light one," spoke Tom, with an air of relief. He was becoming used to the

shocks now, and, when he saw that his precious machinery was not damaged he could view the earth tremors calmly.

"Slight!" exclaimed Mr. Jenks. "Well, I don't call it so. But I see Captain Mentor and Mr. Hosbrook coming. Please don't say anything to them about the diamonds. I'll see you again," and with that, the queer Mr. Jenks walked away.

"We came to see if you were hurt," called the captain, as he neared the young inventor.

"No, I'm all right. How about the others?"

"Only frightened," replied the yacht owner. "This is getting awful. I hoped we were free from the shocks, but they still continue."

"And I guess they will," added Tom. "We certainly are on Earthquake Island!"

"Mr. Parker, the scientist, says this last shock bears out his theory," went on the millionaire. "He says it will be only a question of a few days when the whole island will disappear."

"Comforting, to say the least," commented Tom.

"I should say so. But what are you doing, Mr. Swift?"

"Trying an experiment," answered the young inventor, in some confusion. He was not yet ready to talk about his plans.

"We must begin to think seriously of building some sort of a boat or raft, and getting away from the island," went on the millionaire. "It will be perilous to go to sea with anything we can construct, but it is risking our lives to stay here. I don't know what to do."

"Perhaps Captain Mentor has some plan," suggested Tom, hoping to change the subject.

"No," answered the commander, "I confess I am at a loss to know what to do. There is nothing with which to do anything, that is the trouble! But I did think of hoisting another signal, on this end of the island, where it might be seen if our first one wasn't. I believe I'll do that," and he moved away, to carry out his intention.

"Well, I think I'll get back, Tom, and tell the others that you are all right," spoke Mr. Hosbrook. "I left the camp, after the shock, because Mrs. Nestor was worried about you." The place to which the airship machinery had been removed was some distance from the camp, and out of sight of the shacks.

"Oh, yes. I'm all right," said Tom. Then, with a sudden impulse, he asked:

"Do you know much about this Mr. Barcoe Jenks, Mr. Hosbrook?"

"Not a great deal," was the reply. "In fact,

I may say I do not know him at all. Why do you ask?"

"Because I thought he acted rather strangely."

"Just what the rest of us think," declared the yacht owner. "He is no friend of mine, though he was my guest on the *Resolute*. It came about in this way. I had invited a Mr. Frank Jackson to make the trip with me, and he asked if he could bring with him a Mr. Jenks, a friend of his. I assented, and Mr. Jackson came aboard with Mr. Jenks. Just as we were about to sail Mr. Jackson received a message requiring his presence in Canada, and he could not make the trip.

"But Mr. Jenks seemed so cut-up about being deprived of the yachting trip, and was so fond of the water, that I invited him to remain on board, even if his friend did not. So that is how he came to be among my guests, though he is a comparative stranger to all of us."

"I see," spoke Tom.

"Has he been acting unusually strange?" asked Mr. Hosbrook suspiciously.

"No, only he seemed very anxious to get off the island, but I suppose we all are. He wanted to know what I planned to do."

"Did you tell him?"

"No, for the reason that I don't know whether

I can succeed or not, and I don't want to raise false hopes."

"Then you would prefer not to tell any of us?"

"No one—that is except Mr. Fenwick and Mr. Damon. I may need them to help me."

"I see," responded Mr. Hosbrook. "Well, whatever it is, I wish you luck. It is certainly a fearful place—this island," and, busy with many thoughts, which crowded upon him, the millionaire moved away, leaving Tom alone.

A little while after this Tom might have been seen in close conversation with Mr. Damon and Mr. Fenwick. The former, on hearing what the young inventor had to say, blessed himself and his various possessions so often, that he seemed to have gotten out of breath. Mr. Fenwick exclaimed:

"Tom, if you can work that it will be one of the greatest things you have ever done!"

"I hope I can work it," was all the young inventor replied.

For the next three days Tom, and his two friends, spent most of their time in the neighborhood of the pile of machinery and apparatus taken from the wrecked *Whizzer*. Mr. Jenks hung around the spot, but a word or two from Mr. Hosbrook sent him away, and our three

friends were left to their work in peace, for they were inclined to be secretive about their operations, as Tom did not want his plans known until he was ready.

The gasolene motor was overhauled, and put in shape to work. Then it was attached to the dynamo. When this much had been done, Tom and his friends built a rude shack around the machinery shutting it from view.

"Humph! Are you afraid we will steal it?" asked Mr. Parker, the scientist, who held to his alarming theory regarding the ultimate disappearance of the island.

"No, I simply want to protect it from the weather," answered Tom. "You will soon know all our plans. I think they will work out."

"You'd better do it before we get another earthquake, and the island sinks," was the dismal response.

But there had been no shocks since the one that nearly engulfed Mr. Jenks. As for that individual he said little to any one, and wandered off alone by himself. Tom wondered what kind of diamonds they were that the odd man had, and the lad even had his doubts as to the value of the queer stones he had seen. But he was too busy with his work to waste much time in idle speculation.

CHAPTER XX

THE WIRELESS PLANT

THE castaways had been on Earthquake Island a week now, and in that time had suffered many shocks. Some were mere tremors, and some were so severe as to throw whole portions of the isle into the sea. They never could tell when a shock was coming, and often one awakened them in the night.

But, in spite of this, the refugees were as cheerful as it was possible to be under the circumstances. Only Mr. Jenks seemed nervous and ill at ease, and he kept much by himself.

As for Tom, Mr. Damon and Mr. Fenwick, the three were busy in their shack. The others had ceased to ask questions about what they were doing, and Mr. Nestor and his wife took it for granted that Tom was building a boat.

Captain Mentor and the mate spent much time gazing off to sea, hoping for a sight of the sail of some vessel, or the haze that would indicate

the smoke of a steamer. But they saw nothing.

"I haven't much hope of sighting anything," the captain said. "I know we are off the track of the regular liners, and our only chance would be that some tramp steamer, or some ship blown off her course, would see our signal. I tell you, friends, we're in a bad way."

"If money was any object——," began Mr. Jenks.

"What good would money be?" demanded Mr. Hosbrook. "What we need to do is to get a message to some one—some of my friends—to send out a party to rescue us."

"That's right," chimed in Mr. Parker, the scientist. "And the message needs to go off soon, if we are to be saved."

"Why so?" asked Mr. Anderson.

"Because I think this island will sink inside of a week!"

A scream came from the two ladies.

"Why don't you keep such thoughts to yourself?" demanded the millionaire yacht owner, indignantly.

"Well, it's true," stubbornly insisted the scientist.

"What if it is? It doesn't do any good to remind us of it."

"Bless my gizzard, no!" exclaimed Mr. Damon. "Suppose we have dinner. I'm hungry."

That seemed to be his remedy for a number of ills.

"If we only could get a message off, summoning help, it *would* be the very thing," sighed Mrs. Nestor. "Oh, how I wish I could send my daughter, Mary, word of where we are. She may hear of the wreck of the *Resolute,* and worry herself to death."

"But it is out of the question to send a message for help from Earthquake Island," added Mrs. Anderson. "We are are totally cut off from the rest of the world here."

"Perhaps not," spoke Tom Swift, quietly. He had come up silently, and had heard the conversation.

"What's that you said?" cried Mr. Nestor, springing to his feet, and crossing the sandy beach toward the lad.

"I said perhaps we weren't altogether cut off from the rest of the world," repeated Tom.

"Why not," demanded Captain Mentor. "You don't mean to say that you have been building a boat up there in your little shack, do you?"

"Not a boat," replied Tom, "but I think I have a means of sending out a call for help!"

"Oh, Tom—Mr. Swift—how?" exclaimed

Mrs. Nestor. "Do you mean we can send a message to my Mary?"

"Well, not exactly to her," answered the young inventor, though he wished that such a thing were possible. "But I think I can summon help."

"How?" demanded Mr. Hosbrook. "Have you managed to discover some cable line running past the island, and have you tapped it?"

"Not exactly," was Tom's calm answer, "but I have succeeded, with the help of Mr. Damon and Mr. Fenwick, in building an apparatus that will send out wireless messages!"

"Wireless messages!" gasped the millionaire. "Are you sure?"

"Wireless messages!" exclaimed Mr. Jenks. "I'll give——" He paused, clasped his hands on his belt, and turned away.

"Oh, Tom!" cried Mrs. Nestor, and she went up to the lad, threw her arms about his neck, and kissed him; whereat Tom blushed.

"Perhaps you'd better explain," suggested Mr. Anderson.

"I will," said the lad. "That is the secret we have been engaged upon—Mr. Damon, Mr. Fenwick and myself. We did not want to say anything about it until we were sure we could succeed."

"And are you sure now?" asked Captain Mentor.

"Fairly so."

"How could you build a wireless station?" inquired Mr. Hosbrook.

"From the electrical machinery that was in the wrecked *Whizzer,*" spoke Tom. "Fortunately, that was not damaged by the shock of the fall, and I have managed to set up the gasolene engine, and attach the dynamo to it so that we can generate a powerful current. We also have a fairly good storage battery, though that was slightly damaged by the fall.

"I have just tested the machinery, and I think we can send out a strong enough message to carry at least a thousand miles."

"Then that will reach some station, or some passing ship," murmured Captain Mentor. "There is a chance that we may be saved."

"If it isn't too late," gloomily murmured the scientist. "There is no telling when the island will disappear beneath the sea."

But they were all so interested in Tom's announcement that they paid little attention to this dire foreboding.

"Tell us about it," suggested Mr. Nestor. And Tom did.

He related how he had set up the dynamo and

gasolene engine, and how, by means of the proper coils and other electrical apparatus, all of which, fortunately, was aboard the *Whizzer,* he could produce a powerful spark.

"I had to make a key out of strips of brass, to produce the Morse characters," the lad said. "This took considerable time, but it works, though it is rather crude. I can click out a message with it."

"That may be," said Mr. Hosbrook, who had been considering installing a wireless plant on his yacht, and who, therefore, knew something about it, "you may send a message, but can you receive an answer?"

"I have also provided for that," replied Tom. "I have made a receiving instrument, though that is even more crude than the sending plant, for it had to be delicately adjusted, and I did not have just the magnets, carbons, coherers and needles that I needed. But I think it will work."

"Did you have a telephone receiver to use?"

"Yes. There was a small interior telephone arrangement on Mr. Fenwick's airship, and part of that came in handy. Oh, I think I can hear any messages that may come in answer to ours."

"But what about the aerial wires for sending and receiving messages?" asked Mr. Nestor.

Don't you have to have several wires on a tall mast?"

"Yes, and that is the last thing to do," declared Tom. "I need all your help in putting up those wires. That tall tree on the crest of the island will do," and he pointed to a dead palm that towered gaunt and bare like a ship's mast, on a pile of rocks in the centre of Earthquake Island.

CHAPTER XXI

MESSAGES INTO SPACE

TOM SWIFT'S announcement of the practical completion of his wireless plant brought hope to the discouraged hearts of the castaways. They crowded about him, and asked all manner of questions.

Mr.. Fenwick and Mr. Damon came in for their share of attention, for Tom said had it not been for the aid of his friends he never could have accomplished what he did. Then they all trooped up to the little shack, and inspected the plant.

As the young inventor had said, it was necessarily crude, but when he set the gasolene motor going, and the dynamo whizzed and hummed, sending out great, violet-hued sparks, they were all convinced that the young inventor had accomplished wonders, considering the materials at his disposal.

"But it's going to be no easy task to rig up

the sending and receiving wires," declared Tom. "That will take some time."

"Have you got the wire?" asked Mr. Jenks.

"I took it from the stays of the airship," was Tom's reply, and he recalled the day he was at that work, when the odd man had exhibited the handful of what he said were diamonds. Tom wondered if they really were, and he speculated as to what might be the secret of Phantom Mountain, to which Mr. Jenks had referred.

But now followed a busy time for all. Under the direction of the young inventor, they began to string the wires from the top of the dead tree, to a smaller one, some distance away, using five wires, set parallel, and attached to a wooden spreader, or stay. The wires were then run to the dynamo, and the receiving coil, and the necessary ground wires were installed.

"But I can't understand how you are going to do it," said Mrs. Nestor. "I've read about wireless messages, but I can't get it through my head. How is it done, Mr. Swift?"

"The theory is very simple," said the young inventor. "To send a message by wire, over a telegraph system, a battery or dynamo is used. This establishes a current over wires stretched between two points. By means of what is called a 'key' this current is interrupted, or broken, at

certain intervals, making the sounding instrument send out clicks. A short click is called a dot, and a long click a dash. By combinations of dots, dashes, and spaces between the dots and dashes, letters are spelled out. For instance, a dot and a space and a dash, represent the letter 'A' and so on."

"I understand so far," admitted Mrs. Nestor.

"In telegraphing without wires," went on Tom, "the air is used in place of a metallic conductor, with the help of the earth, which in itself is a big magnet, or a battery, as you choose to regard it. The earth helps to establish the connection between places where there are no wires, when we 'ground' certain conductors.

"To send a wireless message a current is generated by a dynamo. The current flows along until it gets to the ends of the sending wires, which we have just strung. Then it leaps off into space, so to speak, until it reaches the receiving wires, wherever they may be erected. That is why any wireless receiving station, within a certain radius, can catch any messages that may be flying through the air—that is unless certain apparatus is tuned, or adjusted, to prevent this.

"Well, once the impulses, or electric currents, are sent out into space, all that is necessary to do is to break, or interrupt them at certain inter-

vals, to make dots, dashes and spaces. These make corresponding clicks in the telephone receiver which the operator at the receiving station wears on his ear. He hears the code of clicks, and translates them into letters, the letters into words and the words into sentences. That is how wireless messages are sent."

"And do you propose to send some that way?" asked Mrs. Anderson.

"I do," replied Tom, with a smile.

"Where to?" Mrs. Nestor wanted to know.

"That's what I can't tell," was Tom's reply. "I will have to project them off into space, and trust to chance that some listening wireless operator will 'pick them up,' as they call it, and send us aid."

"But are wireless operators always listening?" asked Mr. Nestor.

"Somewhere, some of them are—I hope," was Tom's quiet answer. "As I said, we will have to trust much to chance. But other people have been saved by sending messages off into space; and why not we? Sinking steamers have had their passengers taken off when the operator called for help, merely by sending a message into space."

"But how can we tell them where to come for

us—on this unknown island?" inquired Mrs. Anderson.

"I fancy Captain Mentor can supply our longitude and latitude," answered Tom. "I will give that with every message I send out, and help may come—some day."

"It can't come any too quick for me!" declared Mr. Damon. "Bless my door knob, but my wife must be worrying about my absence!"

"What message for help will you send?" Captain Mentor wanted to know.

"I am going to use the old call for aid," was the reply of the young inventor. "I shall flash into space the three letters 'C. Q. D.' They stand for 'Come Quick—Danger.' A new code call has been instituted for them, but I am going to rely on the old one, as, in this part of the world, the new one may not be so well understood. Then I will follow that by giving our position in the ocean, as nearly as Captain Mentor can figure it out. I will repeat this call at intervals until we get help——"

"Or until the island sinks," added the scientist, grimly.

"Here! Don't mention that any more," ordered Mr. Hosbrook. "It's getting on my nerves! We may be rescued before that awful calamity overtakes us."

"I don't believe so," was Mr. Parker's reply, and he actually seemed to derive pleasure from his gloomy prophecy.

"It's lucky you understand wireless telegraphy, Tom Swift," said Mr. Nestor admiringly, and the others joined in praising the young inventor, until, blushing, he hurried off to make some adjustments to his apparatus.

"Can you compute our longitude and latitude, Captain Mentor," asked the millionaire yacht owner.

"I think so," was the reply. "Not very accurately, of course, for all my papers and instruments went down in the *Resolute*. But near enough for the purpose, I fancy. I'll get right to work at it, and let Mr. Swift have it."

"I wish you would. The sooner we begin calling for help the better. I never expected to be in such a predicament as this, but it is wonderful how that young fellow worked out his plan of rescue. I hope he succeeds."

It took some little time for the commander to figure their position, and then it was only approximate. But at length he handed Tom a piece of paper with the latitude and longitude written on it.

In the meanwhile, the young inventor had been connecting up his apparatus. The wires were

now all strung, and all that was necessary was to start the motor and dynamo.

A curious throng gathered about the little shack as Tom announced that he was about to flash into space the first message calling for help. He took his place at the box, to which had been fastened the apparatus for clicking off the Morse letters.

"Well, here we go," he said, with a smile.

His fingers clasped the rude key he had fashioned from bits of brass and hard rubber. The motor was buzzing away, and the electric dynamo was purring like some big cat.

Just as Tom opened the circuit, to send the current into the instrument, there came an omnious rumbling of the earth.

"Another quake!" screamed Mrs. Anderson. But it was over in a second, and calmness succeeded the incipient panic.

Suddenly, overhead, there sounded a queer crackling noise, a vicious, snapping, as if from some invisible whips.

"Mercy! What's that?" cried Mrs. Nestor.

"The wireless," replied Tom, quietly. "I am going to send a message for help, off into space. I hope some one receives it—and answers," he added, in a low tone.

The crackling increased. While they gathered

about him, Tom Swift pressed the key, making and breaking the current until he had sent out from Earthquake Island the three letters—"C. Q. D." And he followed them by giving their latitude and longitude. Over and over again he flashed out this message.

Would it be answered? Would help come? If so, from where? And if so, would it be in time? These were questions that the castaways asked themselves. As for Tom, he sat at the key, clicking away, while, overhead, from the wires fastened to the dead tree, flashed out the messages.

CHAPTER XXII

ANXIOUS DAYS

AFTER the first few minutes of watching Tom click out the messages, the little throng of castaways that had gathered about the shack, moved away. The matter had lost its novelty for them, though, of course, they were vitally interested in the success of Tom's undertaking. Only Mr. Damon and Mr. Fenwick remained with the young inventor, for he needed help, occasionally, in operating the dynamo, or in adjusting the gasolene motor. Mrs. Nestor, who, with Mrs. Anderson, was looking after the primitive housekeeping arrangements, occasionally strolled up the hill to the little shed.

"Any answer yet, Mr. Swift?" she would ask.

"No," was the reply. "We can hardly expect any so soon," and Mrs. Nestor would depart, with a sigh.

Knowing that his supply of gasolene was limited, Tom realized that he could not run the

dynamo steadily, and keep flashing the wireless messages into space. He consulted with his two friends on the subject, and Mr. Damon said:

"Well, the best plan, I think, would be only to send out the flashes over the wires at times when other wireless operators will be on the lookout, or, rather, listening. There is no use wasting our fuel. We can't get any more here."

"That's true," admitted Tom, "but how can we pick out any certain time, when we can be sure that wireless operators, within a zone of a thousand miles, will be listening to catch clicks which call for help from the unknown?"

"We can't," decided Mr. Fenwick. "The only thing to do is to trust to chance. If there was only some way so you would not have to be on duty all the while, and could send out messages automatically, it would be good."

"Tom shook his head. "I have to stay here to adjust the apparatus," he said. "It works none too easily as it is, for I didn't have just what I needed from which to construct this station. Anyhow, even if I could rig up something to click out 'C. Q. D.' automatically, I could hardly arrange to have the answer come that way. And I want to be here when the answer comes."

"Have you any plan, then?" asked Mr. Damon.

"Bless my shoe laces! there are enough problems to solve on this earthquake island."

"I thought of this,' said Tom. "I'll send out our call for help from nine to ten in the morning. Then I'll wait, and send out another call from two to three in the afternoon. Around seven in the evening I'll try again, and then about ten o'clock at night, before going to bed."

"That ought to be sufficient," agreed Mr. Fenwick. "Certainly we must save our gasolene, for there is no telling how long we may have to stay here, and call for help."

"It won't be long if that scientist Parker has his way," spoke Mr. Damon, grimly. "Bless my hat band, but he's a *most* uncomfortable man to have around; always predicting that the island is going to sink! I hope we are rescued before that happens."

"I guess we all do," remarked Mr. Fenwick. "But, Tom, here is another matter. Have you thought about getting an answer from the unknown—from some ship or wireless station, that may reply to your calls? How can you tell when that will come in?"

"I can't.

"Then won't you or some of us, have to be listening all the while?"

"No, for I think an answer will come only di-

rectly after I have sent out a call, and it has been picked up by some operator. Still there is a possibility that some operator might receive my message, and report to his chief, or some one in authority over him, before replying. In that time I might go away. But to guard against that I will sleep with the telephone receiver clamped to my ear. Then I can hear the answer come over the wires, and can jump up and reply."

"Do you mean you will sleep here?" asked Mr. Damon, indicating the shack where the wireless apparatus was contained.

"Yes," answered Tom, simply.

"Can't we take turns listening for the answer?" inquired Mr. Fenwick, "and so relieve you?"

"I'm afraid not, unless you understand the Morse code," replied Tom. "You see there may be many clicks, which result from wireless messages flying back and forth in space, and my receiver will pick them up. But they will mean nothing. Only the answer to our call for help will be of any service to us."

"Do you mean to say that you can catch messages flying back and forth between stations now?" asked Mr. Fenwick.

"Yes," replied the young inventor, with a smile. "Here, listen for yourself, and he passed the

head-instrument over to the *Whizzer's* former owner. The latter listened a moment.

"All I can hear are some faint clicks," he said.

"But they are a message," spoke Tom. "Wait, I'll translate," and he put the receiver to his ear. *"'Steamship "Falcon" reports a slight fire in her forward compartment,'"* said Tom, slowly. *"'It is under control, and we will proceed.'"*

"Do you mean to say that was the message you heard?" cried Mr. Damon. "Bless my soul, I never can understand it!"

"It was part of a message," answered Tom. "I did not catch it all, nor to whom it was sent."

"But why can't you send a message to that steamship then, and beg them to come to our aid?" asked Mr. Fenwick. "Even if they have had a fire, it is out now, and they ought to be glad to save life."

"They would come to our aid, or send," spoke Tom, "but I can not make their wireless operator pick up our message. Either his apparatus is not in tune, or in accord with ours, or he is beyond our zone."

"But you heard him," insisted Mr. Damon.

"Yes, but sometimes it is easier to pick up messages than it is to send them. However, I will keep on trying."

Putting into operation the plan he had decided on for saving their supply of gasolene, Tom sent out his messages the remainder of the day, at the intervals agreed upon. Then the apparatus was shut down, but the lad paid frequent visits to the shack, and listened to the clicks of the telephone receiver. He caught several messages, but they were not in response to his appeals for aid.

That night there was a slight earthquake shock, but no more of the island fell into the sea, though the castaways were awakened by the tremors, and were in mortal terror for a while.

Three days passed, days of anxious waiting, during which time Tom sent out message after message by his wireless, and waited in vain for an answer. There were three shocks in this interval, two slight, and one very severe, which last cast into the ocean a great cliff on the far end of the island. There was a flooding rush of water, but no harm resulted.

"It is coming nearer," said Mr. Parker.

"What is?" demanded Mr. Hosbrook.

"The destruction of our island. My theory will soon be confirmed," and the scientist actually seemed to take pleasure in it.

"Oh, you and your theory!" exclaimed the millionaire in disgust. "Don't let me hear you mention it again! Haven't we troubles enough?"

whereat Mr. Parker went off by himself, to look at the place where the cliff had fallen.

Each night Tom slept with the telephone receiver to his ear, but, though it clicked many times, there was not sounded the call he had adopted for his station—"E. I."—Earthquake Island. In each appeal he sent out he had requested that if his message was picked up, that the answer be preceded by the letters "E. I."

It was on the fourth day after the completion of the wireless station, that Tom was sending out his morning calls. Mrs. Nestor came up the little hill to the shack where Tom was clicking away.

"No replies yet, I suppose?" she inquired, and there was a hopeless note in her voice.

"None yet, but they may come any minute," and Tom tried to speak cheerfully.

"I certainly hope so," added Mary's mother. "But I came up more especially now, Mr. Swift, to inquire where you had stored the rest of the food."

"The rest of the food?"

"Yes, the supply you took from the wrecked airship. We have used up nearly all that was piled in the improvised kitchen, and we'll have to draw on the reserve supply."

"The reserve," murmured Tom.

"Yes, there is only enough in the shack where

Mrs. Anderson and I do the cooking, to last for about two days. Isn't there any more?"

Tom did not answer. He saw the drift of the questioning. Their food was nearly gone, yet the castaways from the *Resolute* thought there was still plenty. As a matter of fact there was not another can, except those in the kitchen shack.

"Get out wherever there is left some time today, if you will, Mr. Swift," went on Mrs. Nestor, as she turned away, "and Mrs. Anderson and I will see if we can fix up some new dishes for you men-folks."

"Oh—all right," answered Tom, weakly.

His hand dropped from the key of the instrument. He sat staring into space. Food enough for but two days more, with earthquakes likely to happen at any moment, and no reply yet to his appeals for aid! Truly the situation was desperate. Tom shook his head. It was the first time he had felt like giving up.

CHAPTER XXIII

A REPLY IN THE DARK

THE young inventor looked out of the wireless shack. Down on the beach he saw the little band of castaways. They were gathered in a group about Mr. Jenks, who seemed to be talking earnestly to them. The two ladies were over near the small building that served as a kitchen.

"More food supplies needed, eh?" mused Tom. "Well, I don't know where any more is to come from. We've stripped the *Whizzer* bare." He glanced toward what remained of the airship. "I guess we'll have to go on short rations, until help comes," and, wondering what the group of men could be talking about, Tom resumed his clicking out of his wireless message.

He continued to send it into space for several minutes after ten o'clock, the hour at which he usually stopped for the morning, for he thought there might be a possible chance that the electrical impulses would be picked up by some vessel far

out at sea, or by some station operator who could send help.

But there came no answering clicks to the "E. I." station—to Earthquake Island—and, after a little longer working of the key, Tom shut down the dynamo, and joined the group on the beach.

"I tell you it's our only chance," Mr. Jenks was saying. "I must get off this island, and that's the only way we can do it. I have large interests at stake. If we wait for a reply to this wireless message we may all be killed, though I appreciate that Mr. Swift is doing his best to aid us. But it is hopeless!"

"What do you think about it, Tom?" asked Mr. Damon, turning to the young inventor.

"Think about what?"

"Why Mr. Jenks has just proposed that we build a big raft, and launch it. He thinks we should leave the island."

"It might be a good idea," agreed the lad, as he thought of the scant food supply. Of course, I can't say when a reply will be received to my calls for aid, and it is best to be prepared."

"Especially as the island may sink any minute," added Mr. Parker. "If it does, even a raft will be little good, as it may be swamped in the vortex. I think it would be a good plan to make one, then anchor it some distance out from the island.

Then we can make a small raft, and paddle out to the big one in a hurry if need be."

"Yes, that's a good idea, too," conceded Tom.

"And we must stock it well with provisions," said Mr. Damon. "Put plenty of water and food aboard."

"We can't," spoke Tom, quietly.

"Why not?"

"Because we haven't plenty of provisions. That's what I came down to speak about," and the lad related what Mrs. Nestor had said.

"Then there is but one thing to do," declared Mr. Fenwick.

"What?" asked Captain Mentor.

"We must go on half rations, or quarter rations, if need be. That will make our supply last longer. And another thing—we must not let the women folks know. Just pretend that we're not hungry, but take only a quarter, or at most, not more than a half of what we have been in the habit of taking. There is plenty of water, thank goodness, and we may be able to live until help comes."

"Then shall we build the raft?" asked Mr. Hosbrook.

It was decided that this would be a good plan, and they started it that same day. Trees were felled, with axes and saws that had been aboard

the *Whizzer,* and bound together, in rude fashion, with strong trailing vines from the forest. A smaller raft, as a sort of ferry, was also made.

This occupied them all that day, and part of the next. In the meanwhile, Tom continued to flash out his appeals for help, but no answers came. The men cut down their rations, and when the two ladies joked them on their lack of appetite, they said nothing. Tom was glad that Mrs. Nestor did not renew her request to him to get out the reserve food supply from what remained in the wreck of the airship. Perhaps Mr. Nestor had hinted to her the real situation.

The large raft was towed out into a quiet bay of the island, and anchored there by means of a heavy rock, attached to a rope. On board were put cans of water, which were lashed fast, but no food could be spared to stock the rude craft. All the castaways could depend on, was to take with them, in the event of the island beginning to sink, what rations they had left when the final shock should come.

This done, they could only wait, and weary was that waiting. Tom kept faithfully to his schedule, and his ear ached from the constant pressure of the telephone receiver. He heard message after message flash through space, and click on his instrument, but none of them was in

answer to his. On his face there came a grim and hopeless look.

One afternoon, a week following the erection of the wireless station, Mate Fordam came upon a number of turtles. He caught some, by turning them over on their backs, and also located a number of nests of eggs under the warm sands.

"This will be something to eat," he said, joyfully, and indeed the turtles formed a welcome food supply. Some fish were caught, and some clams were cast up by the tide, all of which eked out the scanty food supply that remained. The two ladies suspected the truth now, and they, too, cut down their allowance.

Tom, who had been sitting with the men in their sleeping shack, that evening, rose, as the hour of ten approached. It was time to send out the last message of the night, and then he would lie down on an improvised couch, with the telephone receiver clamped to his ear, to wait, in the silence of the darkness, for the message saying that help was on the way.

"Well, are you off?" asked Mr. Damon, kindly. "I wish some of us could relieve you, Tom."

"Oh, I don't mind it," answered the lad. "Perhaps the message may come to-night."

Hardly had he spoken than there sounded the ominous rumble and shaking that presaged an-

other earthquake. The shack rocked, and threatened to come down about their heads.

"We must be doomed!" cried Mr. Parker. "The island is about to sink! Make for the raft!"

"Wait and see how bad it is," counseled Mr. Hosbrook. "It may be only a slight shock."

Indeed, as he spoke, the trembling of the island ceased, and there was silence. The two ladies, who had retired to their own private shack, ran out screaming, and Mr. Anderson and Mr. Nestor hastened over to be with their wives.

"I guess it's passed over," spoke Mr. Fenwick.

An instant later there came another tremor, but it was not like that of an earthquake shock. It was more like the rumble and vibration of an approaching train.

"Look!" cried Tom, pointing to the left. Their gaze went in that direction, and, under the light of a full moon they saw, sliding into the sea, a great portion of one of the rocky hills.

"A landslide!" cried Captain Mentor. "The island is slowly breaking up.'

"It confirms my theory!" said Mr. Parker, almost in triumph.

"Forget your theory for a while, Parker, please," begged Mr. Hosbrook. "We're lucky

to have left a place on which to stand! Oh, when will we be rescued?" he asked hopelessly.

The worst seemed to be over at least for the present, and, learning that the two ladies were quieted, Tom started up the hill to his wireless station. Mr. Damon and Mr. Fenwick went with him, to aid in starting the motor and dynamo. Then, after the message had been clicked out as usual Tom would begin his weary waiting.

They found that the earthquake shock had slightly disturbed the apparatus, and it took them half an hour to adjust it. As there had been a delay on account of the landslide, it was eleven o'clock before Tom began sending out any flashes, and he kept it up until midnight. But there came no replies, so he shut off the power, and prepared to get a little rest.

"It looks pretty hopeless; doesn't it?" said Mr. Fenwick, as he and Mr. Damon were on their way back to the sleeping shack.

"Yes, it does. Our signal hasn't been seen, no ships have passed this way, and our wireless appeal isn't answered. It does look hopeless but, do you know, I haven't given up yet."

"Why not?"

"Because I have faith in Tom Swift's luck!" declared the eccentric man. "If you had been

with him as much as I have, up in the air, and under the water, and had seen the tight places he has gotten out of, you'd feel the same, too!"

"Perhaps, but here there doesn't seem to be anything to do. It all depends on some one else."

"That's all right. You leave it to Tom. He'll get an answer yet, you see if he doesn't."

* * * * * * * *

It was an hour past midnight. Tom tossed uneasily on the hard bed in the wireless shack. The telephone receiver on his ear hurt him, and he could not sleep.

"I may as well sit up for a while," he told himself, and he arose. In the dimness of the shack he could see the outlines of the dynamo and the motor.

"Guess I'll start her up, and send out some calls," he murmured. "I might just happen to catch some ship operator who is up late. I'll try it."

The young inventor started the motor, and soon the dynamo was purring away. He tested the wireless apparatus. It shot out great long sparks, which snapped viciously through the air. Then, in the silence of the night, Tom clicked

off his call for help for the castaways of Earthquake Island.

For half an hour he sent it away into space, none of the others in their shacks below him, awakening. Then Tom, having worked off his restless fit, was about to return to bed.

But what was this? What was that clicking in the telephone receiver at his ear? He listened. It was not a jumble of dots and dashes, conveying through space a message that meant nothing to him. No! It was his own call that was answered. The call of his station—"E. I."—Earthquake Island!

"Where are you? What's wanted?"

That was the message that was clicked to Tom from somewhere in the great void.

"I get your message 'E. I.' What's wanted? Do I hear you right? Repeat." Tom heard those questions in the silence of the night.

With trembling fingers Tom pressed his own key. Out into the darkness went his call for help.

"We are on Earthquake Island." He gave the longitude and latitude. *"Come quickly or we will be engulfed in the sea! We are castaways from the yacht 'Resolute,' and the airship 'Whizzer.' Can you save us?"*

Came then this query:

"What's that about airship?"

"Never mind airship," clicked Tom. *"Send help quickly! Who are you?"*

The answer flashed to him through space:

"Steamship 'Cambaranian' from Rio de Janeiro to New York. Just caught your message. Thought it a fake."

"No fake," Tom sent back. *"Help us quickly! How soon can you come?"*

There was a wait, and the wireless operator clicked to Tom that he had called the captain. Then came the report:

"We will be there within twenty-four hours. Keep in communication with us."

"You bet I will," flashed back Tom, his heart beating joyously, and then he let out a great shout. "We are saved! We are saved! My wireless message is answered! A steamer is on her way to rescue us!"

He rushed from the shack, calling to the others.

"What's that?" demanded Mr. Hosbrook.

Tom briefly told of how the message had come to him in the night.

"Tell them to hurry," begged the rich yacht owner. "Say that I will give twenty thousand dollars reward if we are taken off!"

"And I'll do the same," cried Mr. Jenks. "I must get to the place where——" Then he

seemed to recollect himself, and stopped suddenly. "Tell them to hurry," he begged Tom. The whole crowd of castaways, save the women, were gathered about the wireless shack.

"They'll need to hurry," spoke Mr. Parker, the gloomy scientist. "The island may sink before morning!"

Mr. Hosbrook and the others glared at him, but he seemed to take delight in his prediction.

Suddenly the wireless instruments hummed.

"Another message," whispered Tom. He listened.

"The 'Cambaranian' will rush here with all speed," he announced, and not a heart there on that lonely and desolate island but sent up a prayer of thankfulness.

CHAPTER XXIV

"WE ARE LOST!"

THERE was little more sleep for any one that night. They sat up, talking over the wonderful and unexpected outcome of Tom Swift's wireless message, and speculating as to when the steamer would get there.

"Bless my pocket comb! But I told you it would come out all right, if we left it to Tom!" declared Mr. Damon.

"But it hasn't come out yet," remarked the pessimistic scientist. "The steamer may arrive too late."

"You're a cheerful sort of fellow to take on a yachting trip," murmured Mr. Hosbrook, sarcastically. "I'll never invite you again, even if you are a great scientist."

"I'm going to sit and watch for the steamer," declared Mr. Damon, as he went outside the shack. The night was warm, and there was a full moon. "Which way will she come from, Tom?"

"I don't know, but I should think, that if she was on her way north, from South America, she'd pass on the side of the island on which we now are."

"That's right," agreed Captain Mentor. "She'll come up from over there," and he pointed across the ocean directly in front of the shacks and camp.

"Then I'm going to see if I can't be the first to sight her lights, declared Mr. Damon.

"She can't possibly get here inside of a day, according to what the operator said," declared Tom.

"Wire them to put on all the speed they can," urged the eccentric man.

"No, don't waste any more power or energy than is needed," suggested Mr. Hosbrook. "You may need the gasolene before we are rescued. They are on their way, and that is enough for now."

The others agreed with this, and so Tom, after a final message to the operator aboard the *Cambaranian* stating that he would call him up in the morning, shut down the motor.

Mr. Damon took up his position where he could see far out over the ocean, but, as the young inventor had said, there was no possible chance of

sighting the relief steamer inside of a day. Still the nervous, eccentric man declared that he would keep watch.

Morning came, and castaways brought to breakfast a better appetite than they had had in some time. They were allowed larger rations, too, for it was seen that they would have just enough food to last until taken off.

"We didn't need to have made the big raft," said Mr. Fenwick, as Tom came down from his station, to report that he had been in communication with the *Cambaranian* and that she was proceeding under forced draught. "We'll not have to embark on it, and I'm glad of it."

"Oh, we may need it yet," asserted Mr. Parker. "I have been making some observations just now, and the island is in a very precarious state. It is, I believe, resting on only a slim foundation, and the least shock may break that off, and send it into the sea. That is what my observations point out."

"Then I wish you wouldn't make any more observations!" exclaimed Mrs. Nestor, with spirit. "You make me nervous."

"And me, also," added Mrs. Anderson.

"Science can not deceive, madam," retorted Mr. Parker.

"Well it can keep quiet about what it knows, and not make a person have cold chills," replied Mary's mother. "I'm sure we will be rescued in time."

There was a slight tremor of an earthquake, as they were eating dinner that day, but, aside from causing a little alarm it did no damage. In the afternoon, Tom again called up the approaching steamer, and was informed that, because of a slight accident, it could not arrive until the next morning. Every effort would be made to keep up speed, it was said. There was much disappointment over this, and Mr. Damon was observed to be closely examining the food supply, but hope was too strong to be easily shattered now.

Mr. Parker went off alone, to make some further "observations" as he called them, but Mr. Hosbrook warned him never again to speak of his alarming theories.

Mr. Barcoe Jenks called Tom aside just before supper that evening.

"I haven't forgotten what I said to you about my diamonds," he remarked, with many nods and winks. "I'll show you how to make them, if you will help me. Did you ever see diamonds made?"

"No, and I guess very few persons have," re-

plied the lad, thinking perhaps Mr. Jenks might not be quite right, mentally.

The night passed without alarm, and in the morning, at the first blush of dawn, every one was astir, looking eagerly across the sea for a sight of the steamer.

Tom had just come down from the wireless station, having received a message to the effect that a few hours more would bring the *Cambaranian* within sight of the island.

Suddenly there was a tremendous shock, as if some great cannon had been fired, and the whole island shook to its very centre.

"Another earthquake! The worst yet!" screamed Mrs. Anderson.

"We are lost!" cried Mrs. Nestor, clinging to her husband.

An instant later they were all thrown down by the tremor of the earth, and Tom, looking toward his wireless station, saw nearly half of the island disappear from sight. His station went down in collapse with it, splashing into the ocean, and the wave that followed the terrible crash washed nearly to the castaways, as they rose and kneeled on the sand.

"The island is sinking!" cried Mr. Parker. "Make for the raft!"

"I guess it's our only chance," murmured Cap-

tain Mentor, as he gazed across the water. There was no steamer in sight. Could it arrive on time? The tremors and shaking of the island continued.

CHAPTER XXV

THE RESCUE—CONCLUSION

Down to where the small raft was moored ran Mr. Parker. He was followed by some of the others.

"We must put off at once!" he cried. "Half the island is gone! The other half may disappear any moment! The steamer can not get here on time, but if we put off they may pick us up, if we are not engulfed in the ocean. Help, everybody!"

Tom gave one more look at where his wireless station had been. It had totally disappeared, there being, at the spot, now but a sheer cliff, which went right down into the sea.

The women were in tears. The men, with pale faces, tried to calm them. Gradually the earthquake tremor passed away; but who could tell when another would come?

Captain Mentor, Mr. Hosbrook and the others were shoving out the small raft. They intended to get aboard, and paddle out to the larger one,

which had been moored some distance away, in readiness for some such emergency as this.

"Come on!" cried Mr. Fenwick to Tom who was lingering behind. "Come on, ladies. We must all get aboard, or it may be too late!"

The small raft was afloat. Mrs. Anderson and Mrs. Nestor, weeping hysterically, waded out through the water to get aboard.

"Have we food?" cried Mr. Damon. "Bless my kitchen range! but I nearly forgot that."

"There isn't any food left to take," answered Mrs. Anderson.

"Shove off!" cried Captain Mentor.

At that instant a haze which had hung over the water, was blown to one side. The horizon suddenly cleared. Tom Swift looked up and gave a cry.

"The steamer! The steamer! The *Cambaranian!*" he shouted, pointing to it.

The others joined in his exclamations of joy, for there, rushing toward Earthquake Island was a great steamer, crowding on all speed!

"Saved! Saved!" cried Mrs. Nestor, sinking to her knees even in the water.

"It came just in time!" murmured Mr. Hosbrook.

"Now I can make my diamonds," whispered Mr. Jenks to Tom.

"Push off! Push off!" cried Mr. Parker. "The island will sink, soon!"

"I think we will be safer on the island than on the raft," declared Captain Mentor. "We had better land again."

They left the little raft, and stood on the shore of the island. Eagerly they watched the approach of the steamer. They could make out hands and handkerchiefs waving to them now. There was eager hope in every heart.

Suddenly, some distance out in the water, and near where the big raft was anchored, there was a curious upheaval of the ocean. It was as if a submarine mine had exploded! The sea swirled and foamed!

"It's a good thing we didn't go out there," observed Captain Mentor. "We would have been swamped, sure as guns."

Almost as he spoke the big raft was tossed high into the air, and fell back, breaking up. The castaways shuddered. Yet were they any safer on the island? They fancied they could feel the little part of it that remained trembling under their feet.

"The steamer is stopping!" cried Mr. Damon.

Surely enough the *Cambaranian* had slowed up. Was she not going to complete the rescue she had begun?

"She's going to launch her lifeboats," declared Captain Mentor. "Her commander dare not approach too close, not knowing the water. He might hit on a rock."

A moment later and two lifeboats were lowered, and, urged on by the sturdy arms of the sailors, they bounded over the waves. The sea seemed to be more and more agitated.

"It is the beginning of the end," murmured Mr. Parker. "The island will soon disappear."

"Will you be quiet?" demanded Mr. Damon, giving the scientist a nudge in the ribs.

The lifeboats were close at hand now.

"Are you all there?" shouted some one, evidently in command.

"All here," answered Tom.

"Then hurry aboard. There seems to be something going on in these waters—perhaps a submarine volcano eruption. We must get away in a hurry!"

The boats came in to the shelving beach. There was a little stretch of water between them and the sand. Through this the castaways waded, and soon they were grasped by the sailors and helped in. In the reaction of their worriment Mrs. Anderson and Mrs. Nestor were both weeping, but their tears were those of joy.

"Give way now, men!" cried the mate in

charge of the boats. "We must get back to the ship!"

The sea was now swirling angrily, but the sailors, who had been in worse turmoils than this, rowed on steadily.

"We feared you would not get here in time," said Tom to the mate.

"We were under forced draught most of the way," was his answer. "Your wireless message came just in time. An hour later and our operator would have gone to bed."

The young inventor realized by what a narrow margin they had been rescued.

"The island will soon sink," predicted Mr. Parker, as they reached the steamer, and boarded her. Captain Valasquez, who was in command, warmly welcomed the castaways.

"We will hear your story later," he said. "Just now I want to get out of these dangerous waters."

He gave the order for full speed, and, as the *Cambaranian* got under way, Tom, and the others, standing on the deck, looked back at Earthquake Island.

Suddenly there sounded a dull, rumbling report. The whole ocean about the island seemed to upheave. There was a gigantic shower of

spray, a sound like an explosion, and when the waters subsided the island had sunk from sight.

"I told you it would go," cried Mr. Parker, triumphantly, but the horror of it all—the horror of the fate that would have been theirs had they remained there an hour longer—held the castaways dumb. The scientist's honor of having correctly predicted the destruction of the island was an empty one.

The agitation of the sea rocked even the mighty *Cambaranian* and, had our friends been aboard the frail raft, they would surely have perished in the sea. As it was, they were safe—saved by Tom Swift's wireless message.

The steamer resumed her voyage, and the castaways told their story. Captain Valasquez refused to receive the large amount of money Mr. Hasbrook and Mr. Jenks would have paid him for the rescue, accepting only a sum he figured that he had lost by the delay, which was not a great deal. The castaways were given the best aboard the ship, and their stories were listened to by the other passengers with bated breath.

In due time they were landed in New York, and Mr. and Mrs. Nestor accompanied Tom to Shopton. Mr. Damon, with many blessings also accompanied them, going to his home in Waterfield. Later it was learned that the other boats

from the *Resolute* had been picked up, and the sailors and guests were all saved.

Of course, as soon as our friends had been rescued by the steamer, the wireless operator aboard her, with whom Tom soon struck up an acquaintance, sent messages to the relatives of the castaways, apprising them of their safety.

And the joy of Mary Nestor, when she found that it was Tom who had saved her parents, can well be imagined. As for our hero, well, he was glad too—for Mary's sake.

"I won't forget my promise to you, Tom Swift," said Mr. Barcoe Jenks, as he parted from the young inventor, and what the promise was will be told in the next volume of this series, to be called: "Tom Swift Among the Diamond Makers; or, The Secret of Phantom Mountain." In that Tom is destined to have many more surprising adventures, as is also Mr. Damon, who learned new ways to call down blessings on himself and his possessions.

And now, for a time, we will take leave of the young inventor and also of his many friends, who never ceased to wonder over Tom Swift's skill with the wireless.

THE END

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